Test Date	25/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Carbon, in all its allotropic forms, burns in oxygen to give _____.

Ans ✔ 1. carbon dioxide

✗ 2. carbon monoxide

✗ 3. carbonic acid

✗ 4. methane

Q.2 When an object is kept in front of a concave mirror of focal length 10 cm, a real image is formed at a distance of 20 cm in front of the mirror. Here, the object distance is _____.

Ans ✗ 1. –5 cm

✗ 2. –30 cm

✗ 3. –10 cm

✔ 4. –20 cm

Q.3 If each vowel in the word TEACHING is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order and then arrange the letters in alphabetical order, then which of the following letters will be fourth from the right in the group of letters thus formed?

Ans ✗ 1. F

✔ 2. I

✗ 3. H

✗ 4. J

Q.4 Every trait in an organism is influenced by which of the following?

Ans ✗ 1. Only paternal DNA

✗ 2. By both maternal and paternal DNA equally

✗ 3. Only maternal DNA

✔ 4. More by paternal DNA than maternal DNA

Q.5 The Jivitputrika festival, which was in the news for an incident in September 2024, is primarily celebrated in which of the following states?

Ans ✗ 1. West Bengal

✗ 2. Gujarat

✗ 3. Odisha

✓ 4. Bihar

Q.6 Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. A is kept second from the bottom. Only three boxes are kept between E and G. G is not kept at the top-most position. F is kept immediately above C. C is kept immediately above E. B is not kept fourth from the top.

How many boxes are kept between C and A?

Ans ✗ 1. Four

✗ 2. One

✗ 3. Two

✓ 4. Three

Q.7 A man invested $\frac{1}{3}$ of his income at 7% simple interest, $\frac{1}{4}$ of his income at 8% simple interest, and the remainder of his income at 10% simple interest. If the total interest at the end of one year was ₹561, what was his initial income?

Ans ✗ 1. ₹4,500

✓ 2. ₹6,600

✗ 3. ₹7,500

✗ 4. ₹3,000

Q.8 In a certain code language,

A + B means 'A is the mother of B',

A − B means 'A is the brother of B',

A × B means 'A is the wife of B',

A ÷ B means 'A is the father of B',

and A # B means 'A is the daughter of B'.

How is P related to K if 'Q − S + P − T # R ÷ K'?

Ans ✓ 1. Brother

✗ 2. Sister

✗ 3. Father

✗ 4. Mother

Q.9 In the address regarding the Union Budget 2024, the Finance Minister highlighted key areas of focus for the upcoming year. Which of the following sectors was emphasised?

Ans ✔ 1. Employment, Skilling, MSMEs and the Middle Class

✘ 2. Education, Sports, Culture and Entertainment

✘ 3. Agriculture, Defense, Space and Healthcare

✘ 4. Infrastructure, Technology, Tourism and Environment

Q.10 Harmful metabolic wastes from our body are removed by the biological process called:

Ans ✘ 1. transportation

✔ 2. excretion

✘ 3. secretion

✘ 4. defecation

Q.11 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All doors are gates.

No door is a lock.

Conclusion:

(I) Some locks are gates.

(II) No lock is a door.

Ans ✘ 1. Only conclusion (I) follows.

✘ 2. Neither conclusion (I) nor (II) follows.

✔ 3. Only conclusion (II) follows.

✘ 4. Both conclusions (I) and (II) follow.

Q.12 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 243 :: 17 : Y

Ans ✗ 1. X = 31, Y = 169

     ✗ 2. X = 34, Y = 148

     ✔ 3. X = 25, Y = 171

     ✗ 4. X = 27, Y = 156

Q.13 Evaluate the given expression.

12 + 18 ÷ 3

Ans ✗ 1. 12

     ✗ 2. 10

     ✗ 3. 22

     ✔ 4. 18

Q.14 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

CGM, EIO, GKQ, IMS, ?

Ans ✗ 1. KOX

     ✗ 2. KNY

     ✗ 3. KOV

     ✔ 4. KOU

Q.15 Who among the following has received the Vigyan Ratna Award in Rashtriya Vigyan Puraskar 2024?

Ans ✗ 1. Dr. Avesh Kumar Tyagi

     ✗ 2. Prof. Umesh Varshney

     ✗ 3. Dr. Anandharamakrishnan C

     ✔ 4. Prof. Govindarajan Padmanabhan

Q.16 Justice M Fathima Beevi was the first female Judge appointed to the Supreme Court of India in 1989. She passed away at the age of 96 on:

Ans ✔ 1. 23 November 2023

     ✗ 2. 25 November 2023

     ✗ 3. 26 November 2023

     ✗ 4. 22 November 2023

Q.17 Large number of impurities present in ore, such as sand , soil , etc., is called

Ans ✔ 1. Gangue

✘ 2. Wrought

✘ 3. Spongy

✘ 4. Hardness of ore

Q.18 In a certain code language, 'towards the end' is coded as 'mb rh gp' and 'end it here' is coded as 'hk mb bl'. What is the code for 'end' in the given code language?

Ans ✘ 1. hk

✘ 2. bl

✔ 3. mb

✘ 4. gp

Q.19 Which cell has changing shapes?

Ans ✘ 1. Smooth muscle

✘ 2. Ovum

✔ 3. Amoeba

✘ 4. Nerve cell

Q.20 If three numbers are in the ratio 5 : 6 : 8 and their sum is 3800, then the greatest number will be:

Ans ✘ 1. 2000

✘ 2. 1000

✘ 3. 1200

✔ 4. 1600

Q.21 The total count of prime numbers less than 50 is:

Ans ✘ 1. 14

✘ 2. 13

✘ 3. 17

✔ 4. 15

Q.22 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. GM – OI

✔ 2. CH – MR

✗ 3. PV – XR

✗ 4. DJ – LF

Q.23 The average monthly salary of a person for the months of January, February, March and April is ₹8,000 and that for the months of February, March, April and May is ₹8,500. If his salary for the month of May is ₹6,500, find his salary for the month of January.

Ans ✗ 1. ₹5,000

✔ 2. ₹4,500

✗ 3. ₹3,000

✗ 4. ₹2,500

Q.24 Arpita buys 9 oranges and 8 bananas for ₹276. When the cost of an orange is decreased by 10% and that of a banana remains the same, then the cost of 5 oranges and 10 bananas is ₹210. What is the original cost of 3 oranges and 4 bananas?

Ans ✗ 1. ₹123

✗ 2. ₹120

✔ 3. ₹108

✗ 4. ₹116

Q.25 The phenomenon involved in the image formation by mirrors is _____.

Ans ✗ 1. diffraction

✗ 2. interference

✗ 3. refraction

✔ 4. reflection

Q.26 There is a 10 m tall tower between two parallel roads. The angles of depression of the roads from the top of the tower are 30° and 45° respectively. Approximately, how far are the roads from each other?

Ans ✔ 1. 27.32 m

✗ 2. 26.44 m

✗ 3. 30.82 m

✗ 4. 29.56 m

Q.27 In a quadrilateral PQRS, if the sum of measures of angles ∠Q and ∠S is 150° while the measures of angles ∠P and ∠R are in ratio 4 : 3, then the measure of ∠R will be:

Ans ✗ 1. 150°

✗ 2. 210°

✔ 3. 90°

✗ 4. 120°

Q.28 Seven people, B, C, D, E, F, G, and K, are sitting in a straight line, facing north. No one sits to the right of G. Only three people sit between G and E. Only two people sit between E and F. C sits third to the left of D. K sits to the immediate right of D.

How many people sit between B and F?

Ans ✔ 1. Three

✗ 2. Two

✗ 3. One

✗ 4. Four

Q.29 Sameer has a solid metal ball having a diameter of 6 cm. He melts it and uses the material for making a solid cylinder. If the diameter of the base of the cylinder is same as that of the ball, what would the height of the cylinder be?

Ans ✗ 1. 8 cm

✗ 2. 6 cm

✔ 3. 4 cm

✗ 4. 4.5 cm

Q.30 The length, the breadth and the height of a closed cuboidal box are 2.5 m, 2 m and 90 cm, respectively. What would be the cost of a canvas needed to cover this box completely, if the cost of the canvas is ₹70 per m^2?

Ans ✗ 1. ₹1,348

✗ 2. ₹1,448

✔ 3. ₹1,267

✗ 4. ₹1,507

Q.31 Which of the following examples shows that particles of matter have enough space between them?

Ans ✔ 1. Potassium permanganate got evenly distributed in water

✗ 2. Boiling of water

✗ 3. Lighting incense stick

✗ 4. Breaking of iron nail

Q.32 If each of the letters in the word COINAGE is arranged in the English alphabetical order, then how many letters are there in the English alphabetical series between the letter which is fourth from the left and the one which is third from the right in the new letter-cluster thus formed?

Ans ✔ 1. One

✘ 2. Four

✘ 3. Five

✘ 4. Two

Q.33 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

13, 24, 46, 79, 123,?

Ans ✘ 1. 172

✔ 2. 178

✘ 3. 176

✘ 4. 174

Q.34 If the acceleration due to gravity of the earth is 6 times the acceleration due to gravity on moon, which of the following statements is correct?

Ans ✘ 1. The weight of a given object is 6 times higher on the moon as compared to its weight on the earth.

✘ 2. The weight of a given object is the same when we measure it on the earth or moon.

✔ 3. The weight of a given object is 6 times higher on the earth as compared to its weight on the moon.

✘ 4. The weight of a given object is 2 times higher on the earth as compared to its weight on the moon.

Q.35 Which legendary musician, known for his work in films like 'Amar Akbar Anthony' and 'Bobby', was awarded the Padma Bhushan on Republic Day 2024?

Ans ✔ 1. Pyarelal Sharma

✘ 2. RD Burman

✘ 3. Laxmikant Shantaram Kudalkar

✘ 4. Ilaiyaraaja

Q.36 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

PK-RM-TU

HC-JE-LM

Ans ✔ 1. MH-OJ-QR

✘ 2. MH-OJ-PR

✘ 3. MG-OJ-QR

✘ 4. MH-OJ-QS

Q.37 Which biotic component of an ecosystem is present in the greatest number?

Ans ✗ 1. Producers

✗ 2. Secondary Consumers

✗ 3. Primary Consumers

✓ 4. Tertiary Consumers

Q.38 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. PKO

✗ 2. FAE

✗ 3. MHL

✓ 4. VRU

Q.39 Who among the following is India's youngest Olympic medallist as of August 2024?

Ans ✗ 1. Lakshya Sen

✗ 2. Neeraj Chopra

✗ 3. Manu Bhaker

✓ 4. Aman Sherawat

Q.40 Town A lies to the north of Town B. Town C lies to the south of Town A. Town D lies to the northeast of Town C. Town E lies to the south of Town D. Town B lies to the northwest of Town E. Town B lies to the south of Town C. What is the position of Town E with respect to Town C?

Ans ✓ 1. Southeast

✗ 2. Northeast

✗ 3. Northwest

✗ 4. Southwest

Q.41 A shopkeeper, on selling a pan for ₹10, loses $\frac{1}{11}$ of what it cost him. The cost price of a pan is:

Ans ✗ 1. ₹12

✓ 2. ₹11

✗ 3. ₹9

✗ 4. ₹10

Q.42 Express the expression below as a perfect square:

$a^2+9b^2+c^2-6ab+6bc-2ac$

Ans ✗ 1. $(a-3b-2c)^2$

✗ 2. $(a+3b+c)^2$

✓ 3. $(a-3b-c)^2$

✗ 4. $(a-3b+c)^2$

Q.43 What determines the pattern of the magnetic field generated by a current through a conductor?

Ans ✗ 1. Material of the conductor

✗ 2. Colour of the conductor

✓ 3. Shape of the conductor

✗ 4. Direction of the current

Q.44 Which of the following is an example of emulsion?

Ans ✗ 1. Foam

✗ 2. Sponge

✓ 3. Face cream

✗ 4. Rubber

Q.45 According to the latest NSSO consumer expenditure survey conducted in 2024, what is the reported poverty rate in India?

Ans ✓ 1. Below 5%

✗ 2. Below 10%

✗ 3. 10%-15%

✗ 4. Above 15%

Q.46 The salaries of P and Q together amount to ₹2,000. P spends 95% of his salary and Q spends 85% of his salary. If now their savings are the same, then P's salary is:

Ans ✗ 1. ₹1,250

✗ 2. ₹750

✓ 3. ₹1,500

✗ 4. ₹500

Q.47 The HCF of 450, 1500 and 1650 is:

Ans
✗ 1. 100

✔ 2. 150

✗ 3. 50

✗ 4. 200

Q.48 A car travels 80 km at the speed of 20 km/h and the next 30 km at the speed of 30 km/h. What is its average speed?

Ans
✔ 1. 22 km/h

✗ 2. 40 km/h

✗ 3. 20 km/h

✗ 4. 30 km/h

Q.49 A, B, C, D, E and F are sitting around a circular table facing the centre. Only two people sit between F and C. D sits to an immediate right of F. A is an immediate neighbour of B and C. What is the position of E with respect to B?

Ans
✔ 1. Third to the right

✗ 2. Immediate left

✗ 3. Second to the left

✗ 4. Immediate right

Q.50 Which of the following is the symbol of the unit of atomic mass?

Ans
✗ 1. mg

✗ 2. ml

✗ 3. g

✔ 4. u

Q.51 The Federation of International Hockey (FIH) Men's World Cup 2023 was conducted in _____.

Ans
✗ 1. Patna, Bihar

✗ 2. Kochi, Kerala

✗ 3. Amaravati, Andhra Pradesh

✔ 4. Rourkela, Odisha

Q.52 The average of the first five multiples of 3 is:

Ans
✗ 1. 3

✗ 2. 12

✔ 3. 9

✗ 4. 15

Q.53 A train travelling at a speed of 72 km/h crosses a pole in 24 sec. What is the length of the train?

Ans ✗ 1. 300 m

✓ 2. 480 m

✗ 3. 125 m

✗ 4. 150 m

Q.54 In the word DYNAMIC, each letter of the word is changed to the letter immediately succeeding it in the English alphabetical order and then the new group of letters thus formed is rearranged according to the English alphabetical order. Which letter is first to the right in the new rearranged group of letters?

Ans ✗ 1. E

✗ 2. D

✓ 3. Z

✗ 4. B

Q.55 Which Indian city recorded the highest PM2.5 level in 2023, making it the most polluted metropolitan area globally?

Ans ✗ 1. Guwahati

✓ 2. Begusarai

✗ 3. Greater Noida

✗ 4. New Delhi

Q.56 Two successive discounts of 30% and 35% on a deal are equivalent to a single discount of:

Ans ✓ 1. 54.5%

✗ 2. 65%

✗ 3. 60%

✗ 4. 55.5%

Q.57 The first _____transport aircraft was formally inducted into the Indian Air Force in 2023.

Ans ✗ 1. C-225 MW

✓ 2. C-295 MW

✗ 3. C-250 MW

✗ 4. C-275 MW

Q.58 JGLI is related to NKPM in a certain way based on the English alphabetical order. In the same way, OLQN is related to SPUR. To which of the following options is LINK related, following the same logic?

Ans
✔ 1. PMRO

✘ 2. PMOR

✘ 3. MPOR

✘ 4. MPRO

Q.59 Study the given table and answer the question that follows.

The table depicts the number of tickets sold on Friday and Saturday by cash and online mode for a cricket match.

Days	Number of tickets sold (cash)	Number of tickets sold (online)
Friday	725	525
Saturday	1000	3000

How many tickets were sold in total on Friday by cash and online together?

Ans
✘ 1. 1050

✘ 2. 1350

✔ 3. 1250

✘ 4. 1150

Q.60 How many water molecules are required to react with three molecules of the iron atom to form Fe_3O_4?

Ans
✘ 1. 2

✘ 2. 1

✔ 3. 4

✘ 4. 3

Q.61 Given below is a cause followed by three effects numbered I, II and III. Read the cause carefully and decide which of the three can be a/the possible effect(s).

Cause - City X has been lashed by lightning and heavy rains for the past two days. The Met Department has predicted more rain in the next 48 hours.

Effect I - The electricity board has decided to increase the tariff by 50 paise per unit in City X.

Effect II - Water-logging is being reported from many areas of City X.

Effect III - Several trees reportedly fell last night on MG Road injuring at least 12 people.

Ans
✘ 1. Only I is a possible effect.

✘ 2. Both I and II are possible effects.

✘ 3. Only II is a possible effect.

✔ 4. Both II and III are possible effects.

Q.62 The kinetic energy of a body of mass 2 kg, which is moving with the constant velocity 5 m/sec, is _____.

Ans ✔ 1. 25 joules

✖ 2. 100 joules

✖ 3. 50 joules

✖ 4. 10 joules

Q.63 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 529 :: 21 : Y

Ans ✔ 1. X = 18, Y = 676

✖ 2. X = 14, Y = 529

✖ 3. X = 12, Y = 729

✖ 4. X = 11, Y = 625

Q.64 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some microphones are speakers.

No speaker is a piano.

Conclusions:

(I) No microphone is a piano.

(II) Some speakers are microphones.

Ans ✔ 1. Only conclusion (II) follows

✖ 2. Both conclusions (I) and (II) follow

✖ 3. Neither conclusion (I) nor (II) follows

✖ 4. Only conclusion (I) follows

Q.65 In a closed circuit, if 100 coulomb charges flow for a duration of 50 sec, then the current drawn in the circuit is _____.

Ans ✖ 1. 0.5 A

✖ 2. 5 A

✖ 3. 0.2 A

✔ 4. 2 A

Q.66 The sum of the ages of 5 children born at intervals of 2 years each is 40 years. What is the age of the eldest child?

Ans ✗ 1. 16 years

✗ 2. 14 years

✗ 3. 10 years

✓ 4. 12 years

Q.67 What is/are the product(s) of the reaction between an acid and a base?

Ans ✓ 1. Both Salt and water

✗ 2. Both Salt and hydrogen gas

✗ 3. Only salt

✗ 4. Only water

Q.68 According to the second law of motion, the rate of change of momentum is proportional to _____.

Ans ✗ 1. inertia

✓ 2. force

✗ 3. energy

✗ 4. displacement

Q.69 In a certain code language, 'ALSO' is coded as '8693' and 'SALE' is coded as '2836'. What is the code for 'E' in the given code language?

Ans ✗ 1. 9

✗ 2. 8

✗ 3. 3

✓ 4. 2

Q.70 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

ZTQ, XRO, VPM, TNK, ?

Ans ✓ 1. RLI

✗ 2. RML

✗ 3. RKL

✗ 4. SMK

Q.71 What is the function of xylem?

Ans
- ✗ 1. Conduction of protein
- ✓ 2. Conduction of water and minerals
- ✗ 3. Conduction of lipid
- ✗ 4. Conduction of food

Q.72 Select the correct statement.

Ans
- ✗ 1. Pollination is visit of insects to the flower.
- ✓ 2. Pollination is transfer of pollen grains from stamen to stigma.
- ✗ 3. Pollination is germination of pollen grains.
- ✗ 4. Pollination is the growth of pollen tube in ovule.

Q.73 Aruna borrowed a sum of ₹9,000 from Jayshree at 10% per annum on compound interest, compounded annually. Find the total amount paid by Aruna after 2 years to clear all the dues.

Ans
- ✗ 1. ₹10,089
- ✗ 2. ₹10,098
- ✗ 3. ₹10,980
- ✓ 4. ₹10,890

Q.74 If 'P' stands for '×', 'Q' stands for '÷', 'R' stands for '−' and 'S' stands for '+', what will come in place of question mark '?' in the following equation?

15 P 6 R 11 P 4 S 38 R 41 S 2 P 5 =?

Ans
- ✓ 1. 53
- ✗ 2. 61
- ✗ 3. 41
- ✗ 4. 49

Q.75 Which two numbers should be interchanged to make the given equation correct?

$56 + 18 − 11 \times 3 + 4 \times (66 \div 2) + 22 = 151$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

Ans
- ✓ 1. 11 and 22
- ✗ 2. 56 and 66
- ✗ 3. 18 and 11
- ✗ 4. 3 and 2

2024/12/02-17:32:39

Test Date	25/11/2024
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Subject	ALP Stage 1

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1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 In a certain code language, 'NUMB' is coded as '4618' and 'BUNT' is coded as '6438'. What is the code for 'T' in the given code language?

Ans ✗ 1. 8

✔ 2. 3

✗ 3. 4

✗ 4. 6

Q.2 Which natural disaster triggered storms, flash floods, and landslips in the northeastern states of India in 2024?

Ans ✗ 1. Cyclone Fani

✗ 2. Cyclone Amphan

✗ 3. Cyclone Yaas

✔ 4. Cyclone Remal

Q.3 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?
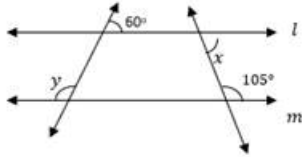
DFH, KMO, RTV, YAC,?

Ans ✗ 1. EGK

✗ 2. FIL

✔ 3. FHJ

✗ 4. EGI

Q.4 In the adjoining figure line l is parallel to line m. What is the value of $x + 2y$?

Ans ✓ 1. 315°

✗ 2. 225°

✗ 3. 340°

✗ 4. 270°

Q.5 Which of the following numbers is divisible by 11?

Ans ✗ 1. 7247564

✓ 2. 9246864

✗ 3. 8245964

✗ 4. 9248164

Q.6 Energy possessed by a body by virtue of its position or configuration is _____.

Ans ✗ 1. electromagnetic energy

✗ 2. kinetic energy

✗ 3. nuclear energy

✓ 4. potential energy

Q.7 Anil spends 40% of his income on rent and 40% of the remaining income on medicines. If he saves ₹7,200 every month, then his monthly income is:

Ans ✗ 1. ₹22,000

✗ 2. ₹25,000

✓ 3. ₹20,000

✗ 4. ₹36,000

Q.8 Which of the following devices does NOT utilise the magnetic effects of electric current?

Ans ✗ 1. Electric motor

✗ 2. Electric generator

✗ 3. Microphone

✓ 4. Magnetic compass

Q.9 If each vowel in the word REALISM is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order and then arrange in reverse order of English alphabetical order, then which of the following letters will be fourth from the left in the group of letter thus formed?

Ans ✔ 1. M

✗ 2. J

✗ 3. F

✗ 4. N

Q.10 Brinda starts from Point A and drives 19 km towards West. She then takes a left turn, drives 22 km, turns left and drives 25 km. She takes a final left turn, drives 22 km and stops at Point P. How far (shortest distance) and towards which direction should she drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)

Ans ✗ 1. 6 km towards the East

✗ 2. 7 km towards the South

✔ 3. 6 km towards the West

✗ 4. 7 km towards the West

Q.11 The average of the first 25 multiples of 3 is:

Ans ✗ 1. 30

✗ 2. 36

✗ 3. 25

✔ 4. 39

Q.12 If the force of attraction between the earth and an apple separated by distance 'x' is 'F', then the force acting on the same apple kept at a distance '2x' will be_____.

Ans ✗ 1. F/2

✗ 2. 2F

✔ 3. F/4

✗ 4. 4F

Q.13 A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for ₹3,200. With the help of C, they completed the work in 3 days. How much is to be paid to C?

Ans ✗ 1. ₹375

✔ 2. ₹400

✗ 3. ₹800

✗ 4. ₹600

Q.14 The average height of 50 pupils in a class is 150 cm. Five of them whose average height is 146 cm, leave the class, and five others whose average height is 156 cm, join. The new average height of the pupils of the class (in cm) is _____ .

Ans ✗ 1. 149

✗ 2. 153

✓ 3. 151

✗ 4. 152

Q.15 Particles of matter are continuously moving due to their:

Ans ✗ 1. nuclear energy

✗ 2. chemical energy

✗ 3. mechanical energy

✓ 4. kinetic energy

Q.16 If 'I' stands for '+', 'J' stands for '×', 'K' stands for '÷', and 'L' stands for '−', what will come in place of the question mark '?' in the following equation?

38 I (3 J 4) L (16 K 2) I 11 =?

Ans ✗ 1. 47

✗ 2. 61

✓ 3. 53

✗ 4. 34

Q.17 Select the pair which follows the same pattern as that followed by the two pair given below. Both pairs follow the same pattern.

FIND : URMW

BENT : YVMG

Ans ✓ 1. HERO : SVIL

✗ 2. BEAD :YVYW

✗ 3. FILE : VROV

✗ 4. SAID : HZRV

Q.18 A 3-digit number is such that its units' digit, tens' digit and hundreds' digit are in the ratio 2 : 3 : 4. The sum of this number and the number obtained by reversing its digits is 1332. Find the positive difference between the 3-digit number and the number formed by reversing its digit.

Ans ✓ 1. 396

✗ 2. 323

✗ 3. 594

✗ 4. 414

Q.19 Cranial nerves arising from the brain and spinal nerves arising from the spinal cord together constitute the:

Ans
✗ 1. central nervous system

✗ 2. autonomic nervous system

✔ 3. peripheral nervous system

✗ 4. endocrine system

Q.20 A series of compounds in which the same functional group substitutes for hydrogen in a carbon chain is called _____.

Ans
✗ 1. heterologous series

✔ 2. homologous series

✗ 3. catenation

✗ 4. isomers

Q.21 Select the correct balanced reaction for $CuO + NH_3 \rightarrow Cu + N_2 + H_2O$.

Ans
✗ 1. $2CuO + 3NH_3 \rightarrow 3Cu + N_2 + 3H_2O$

✗ 2. $3CuO + 2NH_3 \rightarrow 3Cu + N_2 + 4H_2O$

✗ 3. $3CuO + 2NH_3 \rightarrow 3Cu + 2N_2 + 3H_2O$

✔ 4. $3CuO + 2NH_3 \rightarrow 3Cu + N_2 + 3H_2O$

Q.22 If 9.6 : 16.8 :: 18 : x, what is the value of x?

Ans
✗ 1. 24.8

✗ 2. 25.5

✗ 3. 20.4

✔ 4. 31.5

Q.23 Study the given graph and answer the question that follows.

The graph shows the number of employees who used different modes of transport in the year 2010.
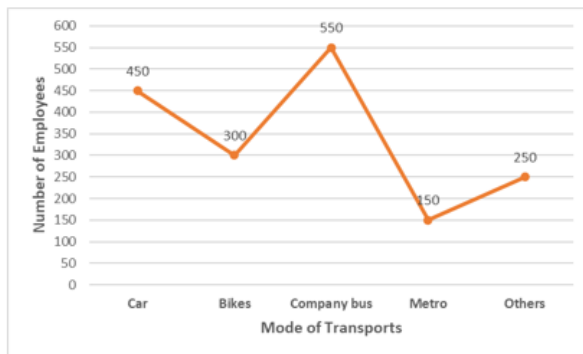
What is the respective ratio between the number of employees who used Bike to the number of employees who used Metro?

Ans ✔ 1. 2 : 1

✗ 2. 5 : 2

✗ 3. 3 : 2

✗ 4. 4 : 5

Q.24 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All plants are rhinos.

All plants are animals.

Conclusion:

(I) All rhinos are plants.

(II) Some animals are rhinos.

Ans ✗ 1. Both conclusions (I) and (II) follow.

✔ 2. Only conclusion (II) follows.

✗ 3. Only conclusion (I) follows.

✗ 4. Neither conclusion (I) nor (II) follows.

Q.25 Who among the following created the record in the boys' 1500m by completing the race in 3:51.12 mins at the 6th Khelo India Youth Games?

Ans ✗ 1. Jay Kumar Verma

✔ 2. Rahul Sarnaliya

✗ 3. Adi Sharma

✗ 4. Rahul Iyer

Q.26 In a certain code language,

A + B means 'A is the brother of B',

A − B means 'A is the son of B',

A × B means 'A is the wife of B' and

A ÷ B means 'A is the father of B'.

Based on the above, how is Q related to S if 'P − Q ÷ R × S + T'?

Ans ✔ 1. Wife's father

✘ 2. Husband's brother

✘ 3. Father

✘ 4. Wife's brother

Q.27 If $x + \frac{1}{x} = 5$, then $x^2 + \frac{1}{x^2} = ?$

Ans ✔ 1. 23

✘ 2. 25

✘ 3. 26

✘ 4. 24

Q.28 Select the number from among the given options that can replace the question mark (?) in the following series.

26 78 36 108 66 198 ?

Ans ✘ 1. 164

✘ 2. 128

✘ 3. 142

✔ 4. 156

Q.29 A man loses 20% of his money. After spending 25% of the remaining amount, he has ₹480 left. What is the amount of money he originally had?

Ans ✔ 1. ₹800

✘ 2. ₹840

✘ 3. ₹600

✘ 4. ₹720

Q.30 The amount of force needed to accelerate a 10 kg mass at $2.5 m/s^2$ is _____.

Ans ✗ 1. 4 N

✔ 2. 25 N

✗ 3. 7.5 N

✗ 4. 12.5 N

Q.31 In case of jelly, which of the following is the dispersed phase?

Ans ✗ 1. Gas phase

✔ 2. Liquid phase

✗ 3. Both solid and liquid phases

✗ 4. Solid phase

Q.32 A, B, C, D, E and F are sitting around a circular table facing the centre. B sits second to the right of D. A is an immediate neighbour of E and C. E sits second to the left of F. What is the position of F with respect to B?

Ans ✗ 1. Third to the right

✔ 2. Immediate left

✗ 3. Immediate right

✗ 4. Second to the left

Q.33 The Government of India has come out with a new set of National Awards in the field of Science, Technology and Innovation known as 'Rashtriya Vigyan Puraskar' in _____ categories.

Ans ✗ 1. five

✗ 2. two

✗ 3. three

✔ 4. four

Q.34 Given below is a statement followed by two possible reasons numbered I and II. Read the statement carefully and decide which of the two explain(s) the event/observation/information given in the statement.

Statement - Long queues were seen outside the electricity bill payment counters in city X on 14th June 2023.

Reasons:

(I) The last date for payment of electricity bills in City X is 15th of every month.

(II) Many people were unable to pay the electricity bill online in June 2023 due to a server failure.

Ans ✗ 1. Neither I nor II is a possible reason.

✗ 2. Only I is a possible reason.

✗ 3. Only II is a possible reason.

✔ 4. Both I and II are possible reasons.

Q.35 In a certain code language, 'FROM' is coded as '4935' and 'MORE' is coded as '3154'. What is the code for 'E' in the given code language?

Ans ✗ 1. 5

✗ 2. 9

✗ 3. 3

✔ 4. 1

Q.36 In which year did the Delhi High Court issue a notice regarding a plea for 33% reservation for women lawyers in Bar Council elections?

Ans ✗ 1. 2022

✗ 2. 2023

✗ 3. 2021

✔ 4. 2024

Q.37 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. OSL

✗ 2. HLE

✗ 3. FJC

✔ 4. SVP

Q.38 A shopkeeper provides successive discounts of 5% and 4%, which are equivalent to a single discount of ____.

Ans ✗ 1. 8%

✗ 2. 9.2%

✗ 3. 9%

✔ 4. 8.8%

Q.39 Which Indian personality played the female protagonist in the movie *Sister Midnight,* **showcased at the Cannes Film Festival in 2024?**

Ans ✗ 1. Taapsee Pannu

✗ 2. Aditi Rao Hydari

✗ 3. Kriti Sanon

✔ 4. Radhika Apte

Q.40 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 679 :: 864 : Y

Ans ✗ 1. X = 898, Y = 649

✗ 2. X = 834, Y = 704

✔ 3. X = 825, Y = 718

✗ 4. X = 812, Y = 756

Q.41 Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. D is kept third from the bottom. Only one box is kept between F and A. Only three boxes are kept between G and E. B is kept immediately above F. E is kept on one of the positions above D.

How many boxes are kept between E and C?

Ans ✗ 1. One

✔ 2. Two

✗ 3. Three

✗ 4. None

Q.42 The sum of two numbers is 36. Five times one number is equal to 4 times the other. The greater of the two numbers is:

Ans ✗ 1. 16

✔ 2. 20

✗ 3. 12

✗ 4. 15

Q.43 Twinkling of stars is related to the phenomenon of _____.

Ans ✗ 1. interference of light

✗ 2. reflection of light

✔ 3. refraction of light

✗ 4. dispersion of light

Q.44 ZX is related to AC in a certain way. In the same way, US is related to FH. To which of the following options is PN related, following the same logic?

Ans ✗ 1. LM

✔ 2. KM

✗ 3. ML

✗ 4. KO

Q.45 Which two numbers should be interchanged to make the given equation correct?

$21 \times 4 + (84 \div 7) \times 2 - 15 \times 5 + 42 = 105$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

Ans ✗ 1. 7 and 21

✔ 2. 84 and 42

✗ 3. 4 and 5

✗ 4. 4 and 2

Q.46 Which of the following is produced when hydrochloric acid reacts with water?

Ans ✗ 1. Only H_3O^+

✔ 2. Both H_3O^+ and Cl^-

✗ 3. Both HO^- and Cl^-

✗ 4. Only Cl^-

Q.47 Electric devices like laundry iron, electric toaster, electric oven, electric kettle and electric heater are based on which effect of electric current?

Ans ✗ 1. Chemical effect

✔ 2. Heating effect

✗ 3. Magnetic effect

✗ 4. Physiological effect

Q.48 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. JMR

✔ 2. RUY

✗ 3. EHM

✗ 4. KNS

Q.49 Who among the following is the author of the book 'The Miracle Makers: Indian Cricket's Greatest Epic'?

Ans ✗ 1. Sunil Joshi

✗ 2. Hrushikesh Kanitkar

✔ 3. Bharat Sundaresan

✗ 4. Shiv Sundar Das

Q.50 Who was appointed as the Director General of Sashastra Seema Bal (SSB) in September 2024?

Ans ✗ 1. Subodh Kumar Jaiswal

✗ 2. Rakesh Asthana

✗ 3. Kuldiep Singh

✔ 4. Amrit Mohan Prasad

Q.51 A man bought a number of oranges at 3 for a rupee and an equal number at 2 for a rupee. At what price per dozen should he sell them to make a profit of 20%?

Ans ✔ 1. ₹6

✗ 2. ₹5

✗ 3. ₹7

✗ 4. ₹4

Q.52 Match the following.

(i) The swollen bottom part of the pistil is	(a) stigma
(ii) The middle elongated part of the pistil is	(b) ovule
(iii) The terminal part of the pistil is	(c) ovary
(iv) The ovary contains	(d) style

Ans ✗ 1. (i) - (a), (ii)- (d), (iii) - (c), (iv)- (b)

✗ 2. (i) - (b), (ii)- (c), (iii) - (a), (iv)- (d)

✗ 3. (i) - (c), (ii)- (b), (iii) - (a), (iv)- (d)

✔ 4. (i) - (c), (ii)- (d), (iii) - (a), (iv)- (b)

Q.53 Find the compound interest on ₹11,000 in 2 years at 4% p.a., interest compounded yearly.

Ans ✗ 1. ₹875.80

✗ 2. ₹906.50

✗ 3. ₹786.60

✓ 4. ₹897.60

Q.54 Which of the following statements is/are related to ecosystem?

(i) It consists of biotic components comprising living organisms.

(ii) All green plants and certain bacteria are producers.

(iii) Decomposers break-down complex organic into simple organic substance.

Ans ✓ 1. (i),(ii) and (iii)

✗ 2. Only (i) and (ii)

✗ 3. Only (i)

✗ 4. Only (i) and (iii)

Q.55 If the HCF and the LCM of two numbers are 7 and 245, respectively, then their product is:

Ans ✗ 1. 1517

✗ 2. 1175

✗ 3. 1751

✓ 4. 1715

Q.56 Which of the following is the characteristics of striated muscles?

Ans ✗ 1. spindle-shaped, unbranched and uninucleate

✗ 2. spindle-shaped, unbranched and multinucleate

✓ 3. cylindrical, unbranched and multinucleate

✗ 4. cylindrical, branched and multinucleate

Q.57 Which cell organelle is associated with generation of ATP?

Ans ✗ 1. Chloroplast

✓ 2. Mitochondria

✗ 3. Endoplasmic reticulum

✗ 4. Lysosomes

Q.58 A car covers four successive 3 km stretches at speeds of 10 km/h, 20 km/h, 30 km/h and 60 km/h, respectively. Its average speed over this distance is:

Ans ✗ 1. 30 km/h

✗ 2. 25 km/h

✔ 3. 20 km/h

✗ 4. 15 km/h

Q.59 The atomic number of an atom is equal to the:

Ans ✔ 1. total number of protons present in the nucleus of an atom

✗ 2. sum of the number of electrons and that of neutrons

✗ 3. sum of the number of protons and that of neutrons

✗ 4. half of the number of electrons present in the nucleus of an atom

Q.60 Water flows into a tank having the dimensions of its base given as 200 m × 150 m through a rectangular pipe having dimensions given as 1.5 m × 1.25 m @ 20 kmph. In what time (in minutes) will the water rise by 2 meters?

Ans ✗ 1. 234

✗ 2. 540

✔ 3. 96

✗ 4. 72

Q.61 Refer to the given number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 2 & % 4 6 @ & 3 Ω 9 # 1 * 8 £ 6 1 7 # (Right)

How many such symbols are there, each of which is immediately preceded by an even number and also immediately followed by an even number?

Ans ✗ 1. Two

✗ 2. More than two

✔ 3. One

✗ 4. None

Q.62 Which of the following options represents metals that do NOT react with cold water?

Ans ✔ 1. Aluminium, iron and zinc

✗ 2. Sodium, calcium and potassium

✗ 3. Sodium, iron and potassium

✗ 4. Sodium, calcium and zinc

Q.63 If each vowel in the word CONSTRUCTION is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which of the following letters will be sixth from the right in the group of letter thus formed?

Ans ✓ 1. V

✗ 2. Q

✗ 3. B

✗ 4. S

Q.64 At a particular time during the day, owing to the position of the sun, a 6 feet tall man casts a shadow of 4 feet, whereas a pole next to the man casts a shadow of 36 feet. What is the height of the pole?

Ans ✓ 1. 54 feet

✗ 2. 63 feet

✗ 3. 60 feet

✗ 4. 56 feet

Q.65 In the case of reflection of the light from a convex mirror, when a parallel beam of light is incident on the reflecting surface, reflected light _____.

Ans ✗ 1. appears to diverge from the centre of curvature

✗ 2. appears to converge at the centre of curvature

✓ 3. appears to diverge from the principal focus

✗ 4. appears to converge at the principal focuss

Q.66 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All fishes are birds.

All birds are animals.

Conclusions:

(I) All animals are fishes.

(II) Some birds are fishes.

Ans ✗ 1. Neither conclusion (I) nor (II) follows.

✗ 2. Both conclusions (I) and (II) follow.

✗ 3. Only conclusion (I) follows.

✓ 4. Only conclusion (II) follows.

Q.67 Dr. Shankarbaba Pundlikrao Papalkar is known for his dedication to improving the lives of:

Ans ✗ 1. senior citizens

✓ 2. disabled and destitute children

✗ 3. farmers

✗ 4. those receiving education

Q.68 In which state is the Gingee Fort, which was recently nominated for the UNESCO World Heritage status, located?

Ans ✓ 1. Tamil Nadu

✗ 2. Gujarat

✗ 3. Rajasthan

✗ 4. Karnataka

Q.69 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BEV, FIR, JMN, NQJ, RUF, ?

Ans ✗ 1. TUS

✗ 2. YVB

✗ 3. STU

✓ 4. VYB

Q.70 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 346 :: 9 : Y

Ans ✗ 1. X = 8, Y = 756

✗ 2. X = 5, Y = 612

✓ 3. X = 7, Y = 732

✗ 4. X = 6, Y = 729

Q.71 Seven people, B, C, D, E, F, G, and K, are sitting in a straight line, facing north. Only three people sit to the left of B. Only K sits to the right of G. Only three people sit between G and D. C sits at some place to the left of F but at some place to the right of E.

How many people sit between E and F?

Ans ✗ 1. Two

✗ 2. One

✔ 3. Three

✗ 4. Four

Q.72 Evaluate the given expression.

$$2^3 \times (-9)^0 \times 3^3$$

Ans ✗ 1. 81

✗ 2. 36

✗ 3. 9

✔ 4. 216

Q.73 A triangle has sides of length 5 cm, 7 cm and 10 cm. Find the area of the triangle (in cm^2).

Ans ✗ 1. 350

✗ 2. $7\sqrt{10}$

✗ 3. 25

✔ 4. $2\sqrt{66}$

Q.74 Traits can be influenced by:

Ans ✔ 1. by both paternal DNA and maternal DNA

✗ 2. only paternal DNA

✗ 3. only maternal DNA

✗ 4. only maternal grandparent DNA

Q.75 In the Union Budget 2024, which initiative did the Finance Minister announce to enhance productivity in agriculture?

Ans ✗ 1. A new subsidy program for farmers

✗ 2. Expansion of irrigation facilities nationwide

✗ 3. Introduction of genetically modified crops

✔ 4. A comprehensive review of the agriculture research setup

Test Date	25/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

* Note

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BEG, CFH, DGI, EHJ, ?

Ans   ✗ 1. FGK

     ✗ 2. FGL

     ✗ 3. FKL

     ✔ 4. FIK

Q.2 Which award has been conferred to Ram Chet Chaudhary in the field of Science and Engineering in 2024?

Ans   ✗ 1. Padma Vibhusan

     ✗ 2. Bharat Ratna

     ✔ 3. Padma Shri

     ✗ 4. Padma Bhusan

Q.3 What will happen during the free fall of a massive object under the influence of gravitational force of the earth?

Ans   ✗ 1. Velocity of the massive object decreases.

     ✔ 2. Velocity of the massive object increases.

     ✗ 3. Mass of the object decreases.

     ✗ 4. Mass of the object increases.

Q.4 Which two numbers should be interchanged to make the given equation correct?

$72 - 56 + (13 + 19) \times 2 - 95 \div 5 + 17 = 76$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)
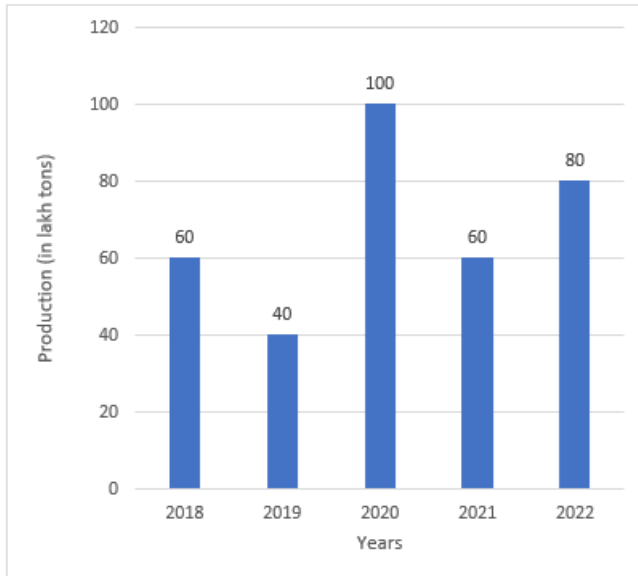
Ans ✗ 1. 17 and 56

✗ 2. 13 and 17

✗ 3. 19 and 5

✔ 4. 19 and 17

Q.5 Study the following graph and answer the given question.

The given bar graph shows the annual production of rice in a state during the period 2018 to 2022.

What is the total production of rice (in lakh tons) for the years 2020, 2021 and 2022 together?

Ans ✗ 1. 270

✗ 2. 260

✗ 3. 250

✔ 4. 240

Q.6 In a certain code language, 'FEND' is coded as '9735' and 'FEUD' is coded as '3769'. What is the code for 'U' in the given code language?

Ans ✔ 1. 6

✗ 2. 7

✗ 3. 3

✗ 4. 9

Q.7 If each letter of the word TYPING, is changed to the letter immediately preceding it in the English alphabetical order and the new group of letters thus formed is rearranged in English alphabetical order, then which letter is first to the right in the new rearranged group of letters?

Ans ✗ 1. S

✗ 2. M

✓ 3. X

✗ 4. O

Q.8 KBWJ is related to MZZG in a certain way based on the English alphabetical order. In the same way, OXCD is related to QVFA. To which of the following options is STIX related, following the same logic?

Ans ✓ 1. URLU

✗ 2. VSLT

✗ 3. TSLV

✗ 4. VRKU

Q.9 Two trains, each 250 m in length, are running on parallel lines in opposite directions at speeds of 90 km/h and 60 km/h respectively. In how many seconds will they cross each other completely?

Ans ✗ 1. 18 sec

✗ 2. 10 sec

✗ 3. 15 sec

✓ 4. 12 sec

Q.10 Which of the following numbers is divisible by 4?

Ans ✗ 1. 9876342

✗ 2. 9876754

✓ 3. 8978624

✗ 4. 7864534

Q.11 A total of _____ Arjun awards were conferred during the National Sports Awards 2023.

Ans ✓ 1. 26

✗ 2. 18

✗ 3. 21

✗ 4. 31

Q.12 Which of the following Sustainable Development Goals is highlighted as needing targeted efforts due to its score being below 50?

Ans ✗ 1. Goal 13 (Climate Action)

✔ 2. Goal 5 (Gender Equality)

✗ 3. Goal 8 (Decent Work and Economic Growth)

✗ 4. Goal 15 (Life on Land)

Q.13 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. QL – OJ

✗ 2. WR – UP

✗ 3. ID – GB

✔ 4. MS – LH

Q.14 In a certain code language,

A + B means 'A is the mother of B',

A – B means 'A is the brother of B',

A × B means 'A is the wife of B',

A ÷ B means 'A is the father of B',

and A # B means 'A is the daughter of B'.

How is R related to T if 'Q # R × P ÷ K × T'?

Ans ✗ 1. Daughter's daughter

✗ 2. Son's wife

✔ 3. Wife's mother

✗ 4. Son's daughter

Q.15 A diver rowing at the speed of 3 km/h in still water takes double the time going 50 km upstream compared to going 50 km downstream. The speed of the diver downstream is:

Ans ✔ 1. 4 km/h

✗ 2. $\frac{10}{3}$ km/h

✗ 3. $\frac{7}{2}$ km/h

✗ 4. $\frac{9}{2}$ km/h

Q.16 The average marks of the students of a class in a particular exam is 80. If 5 students whose average marks in that exam is 40 are excluded, the average marks of the remaining students will be 90. Find the number of students who wrote the exam.

Ans
- ✗ 1. 15
- ✗ 2. 20
- ✗ 3. 35
- ✔ 4. 25

Q.17 Which of the following statements is INCORRECT?

Ans
- ✔ 1. The strength of the force of attraction between the particles of matter is constant, irrespective of the kind of matter.
- ✗ 2. The particles of matter have force acting between them.
- ✗ 3. The force acting between the particles of matter keeps them together.
- ✗ 4. The strength of the force of attraction between the particles of matter varies from one kind of matter to another.

Q.18 The sum of three consecutive multiples of 8 is 2424, find the largest one.

Ans
- ✗ 1. 810
- ✔ 2. 816
- ✗ 3. 824
- ✗ 4. 848

Q.19 If 18 : 24 :: 24 : y, what is the value of y?

Ans
- ✔ 1. 32
- ✗ 2. 36
- ✗ 3. 18
- ✗ 4. 24

Q.20 Which Indian Bharatanatyam dancer and film star, already awarded the Padma Shri in 1968, was honoured with the Padma Bhushan in 2024 during the Civil Investiture Ceremony?

Ans
- ✗ 1. Hema Malini
- ✔ 2. Vyjayanthimala
- ✗ 3. Rukmini Devi Arundale
- ✗ 4. Shobana

Q.21 Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. F is kept third from the top. Only two boxes are kept between B and G. D is kept immediately above G. Only three boxes are kept between E and A. D is kept at one of the positions below F. E is not kept at the top-most position.

Which box is kept fourth from the top?

Ans ✗ 1. E

✗ 2. A

✗ 3. C

✔ 4. B

Q.22 Gastric glands present in the wall of the stomach do NOT release:

Ans ✗ 1. pepsin

✗ 2. hydrochloric acid

✗ 3. mucus

✔ 4. saliva

Q.23 Find the number of bricks, each measuring 24 cm × 12 cm × 8 cm, required to construct a wall 24 m long, 8m high and 60 cm thick if 10% of the wall is filled with mortar?

Ans ✗ 1. 4500

✔ 2. 45000

✗ 3. 450000

✗ 4. 450

Q.24 The tax on a commodity is reduced by 20% and its consumption is increased by 15%. What is the effect on tax revenue?

Ans ✔ 1. It decreases by 8%

✗ 2. It increases by 8%

✗ 3. No change

✗ 4. It increases by 10%

Q.25 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

361, 348, 335, 322, 309,?

Ans ✗ 1. 290

✗ 2. 300

✗ 3. 294

✔ 4. 296

Q.26 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 128 :: 146 : Y

Ans ✗ 1. X = 174, Y = 84

✔ 2. X = 164, Y = 92

✗ 3. X = 168, Y = 98

✗ 4. X = 156, Y = 86

Q.27 Who among the following is the Non-Playing Captain and Coach of Indian Chess team at Chess Olympiad 2024?

Ans ✗ 1. Vikram Singh

✔ 2. Srinath Narayanan

✗ 3. Abhijit Ganguly

✗ 4. Pendyala Harikrishna

Q.28 In 2023, which institution implemented two-factor authentication for all e-way bill and e-invoice systems?

Ans ✗ 1. RBI

✗ 2. CBDT

✗ 3. SEBI

✔ 4. CBIC

Q.29 In a certain code language, 'ARGOT' is coded as '12497' and 'GRAFT' is coded as '29743'. What is the code for 'F' in the given code language?

Ans ✗ 1. 7

✗ 2. 4

✗ 3. 2

✔ 4. 3

Q.30 If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 2 : 3, then the greater of the two angles is:

Ans ✗ 1. 54°

✗ 2. 136°

✗ 3. 120°

✔ 4. 108°

Q.31 Which of the following electrolytes is used in the electrolytic refining of copper?

Ans ✔ 1. Copper sulphate

✘ 2. Sodium sulphate

✘ 3. Copper oxide

✘ 4. Cuprous chloride

Q.32 Which of the following is the general formula of alkenes?

Ans ✘ 1. $C_{2n}H_{2n}$

✘ 2. C_nH_n

✔ 3. C_nH_{2n}

✘ 4. C_nH_{2n+1}

Q.33 In the word MASTER, each consonant is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order. How many consonants are present in the new group of letters thus formed?

Ans ✘ 1. Five

✘ 2. Three

✔ 3. Six

✘ 4. Four

Q.34 The division of labour occurs in:

Ans ✔ 1. both unicellular and multicellular organisms

✘ 2. only multicellular organisms

✘ 3. neither unicellular nor in multicellular organism

✘ 4. only unicellular organisms

Q.35 When an object is kept at a distance 20 cm in front of a concave mirror, a real image is formed at the centre of curvature of the mirror. Magnification produced by the mirror is _____.

Ans ✔ 1. -1

✘ 2. -20

✘ 3. -0.5

✘ 4. -10

Q.36 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some giraffes are rhinos.

All rhinos are tigers.

Conclusions:

(I) Some tigers are giraffes.

(II) All tigers are rhinos.

Ans ✗ 1. Only conclusion (II) follows

✔ 2. Only conclusion (I) follows

✗ 3. Both conclusions (I) and (II) follow

✗ 4. Neither conclusion (I) nor (II) follows

Q.37 Refer to the given number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 7 3 @ 1 7 3 ^ 4 & 3 Ω 9 # * £ 5 (Right)

How many such symbols are there, each of which is immediately preceded by a number and also immediately followed by a number?

Ans ✗ 1. More than five

✔ 2. Four

✗ 3. Five

✗ 4. Three

Q.38 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

YUS, WSQ, UQO, SOM, ?

Ans ✗ 1. RML

✔ 2. QMK

✗ 3. QOL

✗ 4. QKL

Q.39 Which of the following options represents sub-atomic particles found in Thomson's model of an atom?

Ans ✗ 1. Electrons and protons both

✔ 2. Only electrons

✗ 3. Protons and neutrons both

✗ 4. Only protons

Q.40 The average of all the prime numbers between 30 and 50 is:

Ans
✔ 1. 39.8

✘ 2. 40.2

✘ 3. 38.9

✘ 4. 40.4

Q.41 In May 2024, DRDO handed over _____ defence technology projects to IIT Bhubaneswar.

Ans
✘ 1. eleven

✘ 2. seven

✘ 3. five

✔ 4. nine

Q.42 Last year, there were 610 boys in a school. The number decreased by 20% this year. How many girls are there in the school if the number of girls is 175% of the total number of boys in the school this year?

Ans
✘ 1. 798

✔ 2. 854

✘ 3. 782

✘ 4. 848

Q.43 Which of the following is formed by the action of chlorine on dry slaked lime?

Ans
✔ 1. Bleaching powder

✘ 2. Calcium oxide

✘ 3. Hydrochloric acid

✘ 4. Calcium chloride

Q.44 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. Only five people sit between C and D. B sits third from the right end. G sits to the immediate right of C. E sits third to the right of A. How many people sit between G and F?

Ans
✔ 1. One

✘ 2. Three

✘ 3. Two

✘ 4. Four

Q.45 Select the INCORRECT pair.

Ans ✔ 1. Bacteria – fourth trophic level

✘ 2. Autotrophs– first trophic level

✘ 3. Small carnivorous– third trophic level

✘ 4. Primary consumer – second trophic level

Q.46 Fruits and seeds have a high concentration of which of the following plant hormones?

Ans ✘ 1. Abscisic acid

✘ 2. Auxin

✘ 3. Gibberellin

✔ 4. Cytokinin

Q.47 Which Sikkimese craftsman, renowned for his skill in creating the 'Sumak Thyaktuk' (Lepcha traditional hat), was awarded the Padma Shri in 2024 for his contributions to art and cultural heritage?

Ans ✘ 1. Sonam Tshering

✘ 2. Karma Wangchuk

✔ 3. Jordan Lepcha

✘ 4. Tashi Namgyal

Q.48 The LCM of 84, 105 and 140 is:

Ans ✔ 1. 420

✘ 2. 120

✘ 3. 360

✘ 4. 240

Q.49 The value of M in $(p/q)^{2M+2} = (q/p)^{9-M}$ is:

Ans ✔ 1. -11

✘ 2. 6

✘ 3. 5

✘ 4. $\dfrac{-7}{2}$

Q.50 If + means −, − means ×, × means ÷, ÷ means +, then what will come in place of the question mark (?) in the following equation?

$62 - 2 \div 7 + 14 \times 7 = ?$

Ans ✗ 1. 131

✔ 2. 129

✗ 3. 143

✗ 4. 133

Q.51 When we are travelling in a bus, we tend to move forward when the bus is stopped suddenly. This is because of _____.

Ans ✗ 1. Newton's second law of motion

✗ 2. Newton's third law of motion

✔ 3. the inertia of our body

✗ 4. acceleration due to gravity

Q.52 If 25 people working 15 hours a day can complete 5 units of work in 8 days, how many days would be required by 12 persons to complete 10 units of work, working 20 hours a day?

Ans ✔ 1. 25 days

✗ 2. 22 days

✗ 3. 24 days

✗ 4. 20 days

Q.53 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All lemons are potatoes.

Some lemons are papayas.

Conclusions:

(I) Some potatoes are papayas.

(II) All papayas are potatoes.

Ans ✗ 1. Both conclusions (I) and (II) follow

✔ 2. Only conclusion (I) follows

✗ 3. Neither conclusion (I) nor (II) follows

✗ 4. Only conclusion (II) follows

Q.54 L, P, R, V, X, Y and Z are sitting around a circular table facing the centre. Only one person sits between V and L, when counted from the right of V. Only one person sits between L and X. Only one person sits between V and Z. Only two people sit between R and X. Only one person sits between P and Z. Who sits to the immediate right and left of Y, respectively?

Ans
✗ 1. X and Z

✗ 2. V and X

✗ 3. Z and V

✔ 4. V and Z

Q.55 Given below is a statement followed by two possible reasons numbered I and II. Read the statement carefully and decide which of the two explain(s) the event/observation/information given in the statement.

Statement - The railway authorities have decided to run two holiday special trains on Tuesdays and Fridays from City A to City B from 19th October 2023 to 5th January 2024.

Reasons:

(I) Flights from City A to City C are booked to capacity, and airlines are planning to increase the number of flights operating between City A and City C from August 2023.

(II) Many migrants from City B who work in city A, travel back to City B on trains from October to January for the festivals. The existing trains cannot accommodate this increase in passenger demand.

Ans
✔ 1. Only II is a possible reason.

✗ 2. Neither I nor II is a possible reason.

✗ 3. Only I is a possible reason.

✗ 4. Both I and II are possible reasons.

Q.56 Select the INCORRECT statement.

Ans
✔ 1. Female gamete is present in the stigma.

✗ 2. Fertilisation gives us zygote.

✗ 3. Male germ-cells are produced by pollen grain.

✗ 4. The fusion of male gamete and female gamete is known as fertilisation.

Q.57 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans
✗ 1. BG – DI

✔ 2. AD – CG

✗ 3. QV – SX

✗ 4. KP – MR

Q.58 The resistance of a 10 m long copper wire is R ohm. What will be the resistance of a 5 m long copper wire?

Ans ✔ 1. 0.5R ohm

✘ 2. R ohm

✘ 3. 5R ohm

✘ 4. 2R ohm

Q.59 If $4\sin^2\theta = 1$ and θ is an acute angle, then the value of $\cos^2\theta + \tan^2\theta = $_____.

Ans ✘ 1. $\frac{5}{13}$

✔ 2. $\frac{13}{12}$

✘ 3. 1

✘ 4. $\frac{1}{4}$

Q.60 A man sold an article for ₹247.50, there by gaining 12.5%. The cost of the article was:

Ans ✔ 1. ₹220

✘ 2. ₹210

✘ 3. ₹225

✘ 4. ₹224

Q.61 Which of the following devices does NOT make use of current carrying conductor in a magnetic field?

Ans ✔ 1. Electric heater

✘ 2. Electric generator

✘ 3. Electric fan

✘ 4. Electric motor

Q.62 Select the correct balanced equation for the reaction $Al_2(SO_4)_3 + BaCl_2 \rightarrow AlCl_3 + BaSO_4$.

Ans ✘ 1. $Al_2(SO_4)_3 + 2BaCl_2 \rightarrow 2AlCl_3 + 3\ BaSO_4$

✔ 2. $Al_2(SO_4)_3 + 3BaCl_2 \rightarrow 2AlCl_3 + 3\ BaSO_4$

✘ 3. $Al_2(SO_4)_3 + 3BaCl_2 \rightarrow 3AlCl_3 + 2\ BaSO_4$

✘ 4. $2Al_2(SO_4)_3 + 3BaCl_2 \rightarrow 2AlCl_3 + 3BaSO_4$

Q.63 Two successive discounts of 40% and 60% on a deal are equivalent to a single discount of:

Ans ✗ 1. 66%

✗ 2. 70%

✔ 3. 76%

✗ 4. 80%

Q.64 Who was appointed as the Director General of the Narcotics Control Bureau on 17 September 2024?

Ans ✗ 1. Rakesh Asthana

✗ 2. Sanjay Arora

✔ 3. Anurag Garg

✗ 4. Samant Goel

Q.65 We observe geometrical shadow of an opaque object when light is incident on it. This is due to _____.

Ans ✗ 1. reflection of the light

✔ 2. light travelling in a straight line

✗ 3. dispersion of the light by an object

✗ 4. diffraction of the light

Q.66 Simplify the following expression:

$$(2z - 5y)^2 + (5z + 2y)^2 - 25z^2$$

Ans ✗ 1. $29y^2\text{-}4z^2$

✗ 2. $19y^2\text{+}4z^2$

✔ 3. $29y^2\text{+}4z^2$

✗ 4. $19y^2\text{-}4z^2$

Q.67 The discussion paper titled '_____' was released by NITI Aayog on 15 January 2024.

Ans ✗ 1. Economic Growth and Poverty Reduction

✗ 2. Government Initiatives for Poverty Eradication

✗ 3. Poverty Alleviation in India

✔ 4. Multidimensional Poverty in India since 2005-06

Q.68 UPTQ is related to OJNK in a certain way based on the English alphabetical order. In the same way, RMQN is related to LGKH. To which of the following options is NIMJ related, following the same logic?

Ans ✗ 1. CHDG

✔ 2. HCGD

✗ 3. HCDG

✗ 4. CHGD

Q.69 Nalin starts from Point Y and drives 8 km towards North. He then takes a right turn, drives 23 km, turns right and drives 29 km. He then takes a left turn and drives 14 km. He takes a left turn, drives 21 km and stops at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)

Ans ✗ 1. 21 km towards the east

✗ 2. 26 km towards the north

✔ 3. 37 km towards the west

✗ 4. 29 km towards the south

Q.70 The work done by the motor per unit time is called _____.

Ans ✗ 1. energy

✗ 2. momentum

✔ 3. power

✗ 4. acceleration

Q.71 Which of the following environmental factors plays a role in sex determination of few reptiles?

Ans ✗ 1. Water

✗ 2. Pressure

✗ 3. Soil

✔ 4. Temperature

Q.72 Which of the following is NOT an example of homogenous mixture?

Ans ✗ 1. Salt dissolved in water

✗ 2. Copper sulphate powder in water

✗ 3. Sugar dissolved in water

✔ 4. Oil in water

Q.73 A sum of money doubles itself at a certain rate of compound interest in 12 years when the interest is compounded annually. In how many years will it become eight times of itself?

Ans ✔ 1. 36

✗ 2. 12

✗ 3. 48

✗ 4. 24

Q.74 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

X : 125 :: 13 : Y

Ans ✗ 1. X = 12, Y = 173

✗ 2. X = 12, Y = 169

✔ 3. X = 11, Y = 173

✗ 4. X = 11, Y = 169

Q.75 The sides of a rectangle are in the ratio 8 : 10 and its perimeter is 90 cm. The area of this rectangle is:

Ans ✗ 1. 520 cm^2

✗ 2. 550 cm^2

✗ 3. 450 cm^2

✔ 4. 500 cm^2

2024/12/02-17:37:42

Test Date	26/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 What was the unemployment rate in India for individuals aged 15 years and above from July 2023 to June 2024?

Ans ✓ 1. 3.2%

✗ 2. 3.3%

✗ 3. 3.1%

✗ 4. 3.0%

Q.2 Which of the following is obtained upon heating ferrous sulphate?

Ans ✗ 1. Only ferric oxide

✓ 2. Ferric oxide, sulphur dioxide and sulphur trioxide

✗ 3. ferric oxide and sulphur trioxide

✗ 4. ferric oxide and sulphur dioxide

Q.3 If each letter of the word WELDING is changed to the letter immediately succeeding it in the English alphabetical order and the new group of letters thus formed is rearranged in English alphabetical order, then which letter is the third from the left in the new rearranged group of letters?

Ans ✗ 1. F

✗ 2. E

✗ 3. J

✓ 4. H

Q.4 Which award has been conferred to Narayan Chakraborty for his contribution in Science and Engineering in 2024?

Ans ✗ 1. Bharat Ratna

✗ 2. Padma Vibhusan

✗ 3. Padma Bhusan

✔ 4. Padma Shri

Q.5 JHFDA is related to OMKIF in a certain way based on the English alphabetical order. In the same way, NLJHE is related to SQOMJ. To which of the following options is KIGEB related, following the same logic?

Ans ✗ 1. QOMKH

✗ 2. PNLJH

✗ 3. QOMKI

✔ 4. PNLJG

Q.6 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−', what will come in place of question mark '?' in the following equation?

92 D 12 B 3 C (63 A 3) D 15 =?

Ans ✗ 1. 78

✔ 2. 62

✗ 3. 54

✗ 4. 80

Q.7 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All engines are rockets.

All planes are rockets.

Conclusions:

(I) Some engines are planes.

(II) All planes are engines.

Ans ✗ 1. Only conclusion (II) follows

✔ 2. Neither conclusion (I) nor (II) follows

✗ 3. Both conclusions (I) and (II) follow

✗ 4. Only conclusion (I) follows

Q.8 In a certain code language, 'fair weather friend' is coded as 'kl ph gb' and 'best friend ever' is coded as 'ju fv kl'. How is 'friend' coded in the given language?

Ans
✗ 1. ph

✔ 2. kl

✗ 3. fv

✗ 4. gb

Q.9 As of September 2024, who among the following cricketers (men) is India's second highest wicket taker in the Test Matches?

Ans
✔ 1. R Ashwin

✗ 2. Harbhajan Singh

✗ 3. Kapil Dev

✗ 4. Anil kumble

Q.10 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

FLB, IOE, LRH, OUK,?

Ans
✗ 1. RYM

✗ 2. RYN

✗ 3. RXM

✔ 4. RXN

Q.11 Town A lies to the southwest of Town R. Town D lies to the east of Town A. Town T lies to the southeast of Town D. Town R lies to the north of Town T. Town M lies to the southeast of Town T. What is the position of Town M with respect to Town D?

Ans
✔ 1. Southeast

✗ 2. Northwest

✗ 3. Northeast

✗ 4. Southwest

Q.12 The radius of the base and the height of a closed cylinder are in the ratio 1 : 3. Using $\pi = \frac{22}{7}$, find its total surface area if its curved surface area is 924 m^2.

Ans
✗ 1. 1848 m^2

✔ 2. 1232 m^2

✗ 3. 1512 m^2

✗ 4. 908 m^2

Q.13 A solution contains 40 ml of acid in 120 ml of water. Calculate the concentration in terms of volume by volume percentage of the solution.

Ans
- ✗ 1. 12%
- ✔ 2. 25%
- ✗ 3. 30%
- ✗ 4. 45%

Q.14 For a data, if the mean is 28.5 and the median is 32, then the mode using empirical formula is:

Ans
- ✗ 1. 40
- ✗ 2. 41
- ✔ 3. 39
- ✗ 4. 42

Q.15 As of September 2024, who among the following Indian Cricketers has a record of scoring 6 centuries and 522 wickets in test cricket to his credit?

Ans
- ✗ 1. Akshar Patel
- ✔ 2. Ravichandra Ashwin
- ✗ 3. Hardik Pandya
- ✗ 4. Ravindra Jadeja

Q.16 If each consonant in the word DANCER is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order, then which of the following letters is repeated twice in the new group of letters thus formed?

Ans
- ✔ 1. B
- ✗ 2. Q
- ✗ 3. M
- ✗ 4. C

Q.17 Which cell organelle serves as a channel for transport of material between various regions of cytoplasm?

Ans
- ✗ 1. Chloroplast
- ✗ 2. Lysosomes
- ✔ 3. Endoplasmic reticulum
- ✗ 4. Mitochondria

Q.18 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 521 :: 794 : Y

Ans   ✘ 1. X = 674, Y = 588

    ✔ 2. X = 659, Y = 656

    ✘ 3. X = 628, Y = 594

    ✘ 4. X = 698, Y = 612

Q.19 What will come in the place of '?' in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

$76 \div 4 + 108 \times 3 - 5 = ?$

Ans   ✘ 1. 265

    ✘ 2. 275

    ✘ 3. 271

    ✔ 4. 273

Q.20 In a certain code language,

A + B means 'A is the mother of B',

A − B means 'A is the brother of B',

A × B means 'A is the wife of B' and

A ÷ B means 'A is the father of B'.

Based on the above, how is Q related to T if 'P − Q × R ÷ S + T'?

Ans   ✘ 1. Daughter

    ✘ 2. Mother's brother

    ✔ 3. Mother's mother

    ✘ 4. Mother

Q.21 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

The price of wheat has been steadily rising across the country since the last 3 weeks, due to shortages reported from major wholesale markets.

Courses of Action:

(I) The Government should set up an urgent investigation to check the reasons for the shortages.

(II) The Government should provide oil at subsidised rates to citizens till wheat supplies are restored.

Ans ✗ 1. Both I and II follow

✗ 2. Only II follows

✗ 3. Neither I nor II follows

✔ 4. Only I follows

Q.22 Simplify: $3889 + 12.952 - 47.95$

Ans ✗ 1. 3853.892

✗ 2. 3854.012

✗ 3. 3853.982

✔ 4. 3854.002

Q.23 In the word KNIGHT, each consonant is changed to the letter immediately succeeding it in the English alphabetical order and each vowel is changed to the letter immediately preceding it in the English alphabetical order. How many vowels are present in the new group of letters thus formed?

Ans ✗ 1. Four

✗ 2. None

✔ 3. Three

✗ 4. Two

Q.24 The income of X is 60% more than Y's income and the income of Y is 40% more than Z's income. By what percentage is X's income more than Z's income?

Ans ✗ 1. 134%

✗ 2. 224%

✔ 3. 124%

✗ 4. 234%

Q.25 A textbook has a total of 662 pages. It is divided into two parts. The second part of the book has 52 pages less than the first part. How many pages are there in the first part of the book?

Ans ✗ 1. 305

✗ 2. 372

✗ 3. 324

✔ 4. 357

Q.26 Which of the following metals are mixed with iron to get stainless steel?

Ans ✗ 1. nickel and zinc

✗ 2. nickel and copper

✔ 3. nickel and chromium

✗ 4. nickel and tin

Q.27 Which physical quantity represents the rate at which electric energy is dissipated or consumed in an electric circuit?

Ans ✗ 1. Electrical energy

✗ 2. Heat energy

✗ 3. Potential difference

✔ 4. Electric power

Q.28 8 men and 12 women can build a wall in 10 days. 6 men and 8 women can build the same wall in 14 days. How many more days will 1 woman take to build that wall alone compared to the number of days 1 man will take to build the same wall alone?

Ans ✔ 1. 140 days

✗ 2. 35 days

✗ 3. 280 days

✗ 4. 70 days

Q.29 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

HKN, QTW, ZCF, ILO,?

Ans ✗ 1. RTV

✗ 2. QTW

✔ 3. RUX

✗ 4. QSU

Q.30 If $a : b = 3 : 4$ and $b : c = 4 : 1$, then $a : b : c = $?

Ans ✓ 1. $3 : 4 : 1$

✗ 2. $3 : 1 : 4$

✗ 3. $4 : 3 : 1$

✗ 4. $4 : 1 : 3$

Q.31 Solid CO_2 gets converted directly into the gaseous state upon decreasing the pressure to _____.

Ans ✓ 1. 1 atmosphere, without coming to the liquid state

✗ 2. 4 atmosphere, without coming to the liquid state

✗ 3. 2 atmosphere, without coming to the liquid state

✗ 4. 3 atmosphere, without coming to the liquid state

Q.32 Reflex arcs are formed in which part of the nervous system?

Ans ✗ 1. Cerebellum

✓ 2. Spinal cord

✗ 3. Medulla

✗ 4. Fore brain

Q.33 Simplify the following expression:

$$\frac{4.33 \times 4.33 - 2.65 \times 2.65}{1.68}$$

Ans ✗ 1. 6.99

✗ 2. 6.96

✗ 3. 6.94

✓ 4. 6.98

Q.34 Where does the centre of curvature of a concave mirror lie?

Ans ✓ 1. In front of the mirror

✗ 2. Behind the mirror

✗ 3. At the edge of the mirror

✗ 4. At the centre of the mirror

Q.35 The relation between thrust (T), pressure (P) and area (A) of an object in a given medium is _____.

Ans ✗ 1. $T \times A = P$

✗ 2. $T = P + A$

✗ 3. $T = P/(A \times A)$

✔ 4. $T = P \times A$

Q.36 Which of the following Indian states hosted the 2023 Hornbill Music Festival?

Ans ✗ 1. Gujarat

✗ 2. Odisha

✗ 3. Kerala

✔ 4. Nagaland

Q.37 RGEL is related to SIHO in a certain way based on the English alphabetical order. In the same way, VOQX is related to WQTA. To which of the following options is YUZG related, following the same logic?

Ans ✗ 1. ZWCK

✗ 2. ZYCJ

✗ 3. ZYBJ

✔ 4. ZWCJ

Q.38 In a row of people, Marshall is sitting 13th from the left end and 36th from the right end. What is the total number of persons in the row?

Ans ✗ 1. 49

✗ 2. 46

✗ 3. 50

✔ 4. 48

Q.39 Under which Section of the Telecommunications Act, 2023, was the Universal Service Obligation Fund renamed as Digital Bharat Nidhi?

Ans ✗ 1. Section 20(1)

✔ 2. Section 24(1)

✗ 3. Section 12(3)

✗ 4. Section 30(2)

Q.40 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans
- ✗ 1. LO-MP
- ✗ 2. CF-DG
- ✔ 3. SW-UY
- ✗ 4. TW-UX

Q.41 A dishonest shopkeeper pretends to sell his goods at cost price. However, he uses a false weight on which 984 gm is written, but actually weighs lesser. Using this false weight, the shopkeeper makes a gain of 23%. The actual measure of the weight used is:

Ans
- ✗ 1. 935 gm
- ✔ 2. 800 gm
- ✗ 3. 900 gm
- ✗ 4. 850 gm

Q.42 The joint exercise involving the Indian Army's Kharga Corps and the Indian Air Force in 2024 was conducted in which state?

Ans
- ✗ 1. Rajasthan
- ✔ 2. Punjab
- ✗ 3. Haryana
- ✗ 4. Gujarat

Q.43 Seven people, B, C, D, E, F, G, and K, are sitting in a straight line, facing north. Only K sits to the left of G. Only four people sit between K and C. Only E sits between F and D and F is not an immediate neighbour of C.

Who sits at the extreme right of the line?

Ans
- ✔ 1. B
- ✗ 2. G
- ✗ 3. C
- ✗ 4. F

Q.44 In a certain code language, 'KNEW' is coded as '4682' and 'KINE' is coded as '6238'. What is the code for 'I' in the given code language?

Ans
- ✗ 1. 8
- ✔ 2. 3
- ✗ 3. 6
- ✗ 4. 2

Q.45 If a person can see far objects distinctly but cannot see nearby objects clearly, then this eye defect can be corrected by using _____.

Ans ✗ 1. a plane mirror

✗ 2. a concave lens of suitable power

✗ 3. a plane glass plate

✔ 4. a convex lens of suitable power

Q.46 Variegated leaves are found in which of the following plants?

Ans ✗ 1. Banana

✗ 2. Rose

✗ 3. Neem

✔ 4. Croton

Q.47 If a regular polygon has 35 diagonals, then the sum of its interior angles is:

Ans ✗ 1. $1980°$

✗ 2. $1800°$

✔ 3. $1440°$

✗ 4. $1620°$

Q.48 Study the given table and answer the question that follows.

The table depicts new admissions in the Primary and Middle wings of a school in the years 2021 and 2022.

Years	New admission in Primary Wing	New admission in Middle Wing
2021	25	20
2022	12	15

How many new admissions were there in the Primary wing of the school in the years 2021 and 2022 together?

Ans ✗ 1. 33

✗ 2. 35

✗ 3. 31

✔ 4. 37

Q.49 In Fleming's left hand rule, which physical quantity is represented by the middle finger?

Ans ✗ 1. Direction of force

✗ 2. Direction of the motion of conductor

✗ 3. Direction of the magnetic field

✔ 4. Direction of electric current

Q.50 In June 2024, which of the following Indian cities was officially recognised as World Craft City by the World Crafts Council?

Ans   ✔ 1. Srinagar

     ✘ 2. Bhopal

     ✘ 3. New Delhi

     ✘ 4. Kolkata

Q.51 Blood brings carbon dioxide from the rest of the body for release into the:

Ans   ✘ 1. intestines

     ✔ 2. alveoli

     ✘ 3. stomach

     ✘ 4. oesophagus

Q.52 Two plumbers, X and Y, are paid a total of ₹660 per day by their employer. If X is paid 120% of the sum paid to Y, then how much is Y paid per day?

Ans   ✘ 1. ₹200

     ✘ 2. ₹250

     ✔ 3. ₹300

     ✘ 4. ₹350

Q.53 Find the median of the data 11, 16, 33, 15, 51, 19, 71, 75, 21, 17.

Ans   ✘ 1. 24

     ✔ 2. 20

     ✘ 3. 18

     ✘ 4. 22

Q.54 An article is sold for ₹x after offering two successive discounts of 20% and 15% on its marked price of ₹500. The value of x is:

Ans   ✔ 1. 340

     ✘ 2. 285

     ✘ 3. 280

     ✘ 4. 345

Q.55 Which elements of xylem tissue form interconnected water-conducting channels?

Ans   ✗ 1. Only Vessels

   ✗ 2. Vessels and Xylem fibres

   ✗ 3. Tracheids and Xylem fibres

   ✓ 4. Vessels and Tracheids

Q.56 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

24, 26, 30, 36, 44,?

Ans   ✓ 1. 54

   ✗ 2. 51

   ✗ 3. 57

   ✗ 4. 53

Q.57 A moving body covers 10 m distance along a straight path in each second. The body is under which type of motion?

Ans   ✓ 1. Uniform motion

   ✗ 2. Circular motion

   ✗ 3. Non-uniformly accelerated motion

   ✗ 4. Uniformly accelerated motion

Q.58 Select the correct law for the following statement.
During a chemical reaction mass is neither created nor destroyed.

Ans   ✗ 1. Charles Law

   ✗ 2. Law of thermodynamic

   ✗ 3. Henry's Law

   ✓ 4. Law of conversation of mass

Q.59 What was the score for Goal 1 (No Poverty) in the 2023-24 SDG India Index?

Ans   ✗ 1. 54

   ✗ 2. 60

   ✗ 3. 67

   ✓ 4. 72

Q.60 Simplify the expression: $\sin A + \dfrac{\cos A}{\tan(90 - A)}$

Ans ✗ 1. cotA

✗ 2. 2cosecA

✗ 3. tanA

✓ 4. 2sinA

Q.61 Which of the following statements is INCORRECT about sodium carbonate?

Ans ✓ 1. Sodium carbonate is used to neutralise excess acid in the stomach.

✗ 2. Sodium carbonate is used in the manufacture of sodium compounds, such as borax.

✗ 3. Sodium carbonate is used in glass, soap and paper industries.

✗ 4. Sodium carbonate can be used as a cleaning agent for domestic purposes.

Q.62 If the radius of a sphere is increased by 50%, find the increase percent in the volume.

Ans ✗ 1. 325%

✓ 2. 237.5%

✗ 3. 225%

✗ 4. 337.5%

Q.63 Which of the following organisms reproduces by budding?

Ans ✗ 1. Earthworm

✗ 2. Cockroach

✗ 3. Frog

✓ 4. Hydra

Q.64 Burning of naphthalene on a spatula gives a _____.

Ans ✗ 1. red flame

✗ 2. sooty flame

✓ 3. yellow flame

✗ 4. clean flame

Q.65 If 9 lines of a print, in a column of a book, contain 36 words, how many words will a column of 51 lines contain?

Ans ✗ 1. 208

✗ 2. 192

✓ 3. 204

✗ 4. 196

Q.66 Two numbers are in the ratio 3 : 2. Their LCM and HCF are 24 and 4, respectively. The greater of the two numbers is:

Ans ✔ 1. 12

✗ 2. 14

✗ 3. 10

✗ 4. 8

Q.67 A invests ₹8,000 and B invests ₹11,000 at the same rate of simple interest per annum. If, at the end of 3 years, B gets ₹720 more interest than A, then find the rate of simple interest per annum.

Ans ✗ 1. 12%

✗ 2. 6%

✗ 3. 10%

✔ 4. 8%

Q.68 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. UPR

✗ 2. LGI

✔ 3. OKL

✗ 4. DYA

Q.69 A, B, C, D, E and F are sitting around a circular table facing the centre. A sits second to the left of B. E sits to an immediate left of A. C sits to the immediate right of F. What is the position of C with respect to D?

Ans ✗ 1. Second to the right

✔ 2. Third to the left

✗ 3. Immediate right

✗ 4. Second to the left

Q.70 A cyclist covers 2.5 km in 4 minutes 10 seconds. How long will he take to cover 6 km at the same speed?

Ans ✗ 1. 12 minutes

✗ 2. 11 minutes

✗ 3. 9 minutes

✔ 4. 10 minutes

Q.71 The value of $(0.000001)^{1/3}$ is:

Ans ✔ 1. 0.01

✘ 2. 0.1

✘ 3. 0.001

✘ 4. 0.000001

Q.72 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All clothes are rings.

No cloth is a bottle.

Conclusions:

(I) Some rings are bottles.

(II) Some rings are clothes.

Ans ✘ 1. Both conclusions (I) and (II) follow

✘ 2. Only conclusion (I) follows

✘ 3. Neither conclusion (I) nor (II) follows

✔ 4. Only conclusion (II) follows

Q.73 In 2024, which bank partnered with Veefin Solutions to launch the SmartFin, a digital supply-chain finance platform?

Ans ✘ 1. ICICI Bank

✘ 2. UCO Bank

✔ 3. YES Bank

✘ 4. HDFC Bank

Q.74 A car moves with a uniform velocity (v) in a particular direction for a distance (s) under the action of a force (F) acting in the same direction. The work done by the force will be:

Ans ✘ 1. Fv

✘ 2. −Fs

✘ 3. −Fv

✔ 4. Fs

Q.75 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 30 :: 175 : Y

Ans ✗ 1. X = 145, Y = 38

✗ 2. X = 180, Y = 44

✗ 3. X = 195, Y = 27

✔ 4. X = 160, Y = 33

2024/12/02-19:59:52

Test Date	26/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 112 :: 15 : Y

Ans ✓ 1. X = 12, Y = 184

✗ 2. X = 16, Y = 192

✗ 3. X = 14, Y = 166

✗ 4. X = 10, Y = 148

Q.2 Which part of the neuron is responsible for acquiring information?

Ans ✓ 1. Dendritic tip

✗ 2. Cell body

✗ 3. Synapse

✗ 4. Axon

Q.3 The LCM of 24, 42 and 56 is:

Ans ✗ 1. 186

✓ 2. 168

✗ 3. 816

✗ 4. 618

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Q.4 In a certain code language, 'climb the mountains' is coded as 'js bg md' and 'climb the tree' is coded as 'bg cx js'. What is the code for 'tree' in the given code language?

Ans ✗ 1. js

✓ 2. cx

✗ 3. md

✗ 4. bg

Q.5 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

HLA, BFU, VZO, PTI,?

Ans ✗ 1. JMC

✓ 2. JNC

✗ 3. JNB

✗ 4. JMB

Q.6 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. BK-VE

✓ 2. ZI-UD

✗ 3. EN-YH

✗ 4. TC-NW

Q.7 For preparation of which of the following compounds is the chlor-alkali process used?

Ans ✗ 1. $NaHCO_3$

✓ 2. $NaOH + Cl_2$

✗ 3. Na_2CO_3

✗ 4. *NaCl*

Q.8 Khelo India Para games (2023) were held in _____.

Ans ✗ 1. Dispur

✗ 2. Ahmedabad

✗ 3. Patna

✓ 4. New Delhi

Q.9 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 68.4 :: 22 : Y

Ans ✔ 1. X = 18, Y = 83.6

✗ 2. X = 20, Y = 74.8

✗ 3. X = 14, Y = 68.8

✗ 4. X = 16, Y = 70.4

Q.10 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some beds are tables.

No tables are chairs.

Conclusions:

(I) All tables are beds.

(II) Some chairs are beds.

Ans ✗ 1. Only conclusion (II) follows.

✗ 2. Only conclusion (I) follows.

✗ 3. Both conclusions (I) and (II) follow.

✔ 4. Neither conclusion (I) nor (II) follows.

Q.11 Which phenomenon causes bending of the ray of light when it moves in the earth's atmosphere?

Ans ✗ 1. Atmospheric reflection

✗ 2. Atmospheric dispersion

✔ 3. Atmospheric refraction

✗ 4. Atmospheric scattering

Q.12 A car can cover 275 km in 5 hours. If its speed is reduced by 5 km/hr, then how much time will the car take to cover a distance of 250 km?

Ans ✗ 1. 6 hr

✔ 2. 5 hr

✗ 3. 5 hr 30 min

✗ 4. 4 hr 30 min

Q.13 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

CFI, LOR, UXA, DGJ,?

Ans ✗ 1. LOR

✔ 2. MPS

✗ 3. MOQ

✗ 4. LNP

Q.14 In what duration will a sum of money double itself at 10% per annum rate of simple interest?

Ans ✗ 1. 5 years

✔ 2. 10 years

✗ 3. 12 years

✗ 4. 8 years

Q.15 Which of the following options does NOT represent a property of suspensions?

Ans ✔ 1. The particles of a suspension cannot be seen by the naked eyes.

✗ 2. A suspension is unstable in nature.

✗ 3. The particles of a suspension scatter a beam of light passing through it.

✗ 4. A suspension is a heterogeneous mixture.

Q.16 Out of his total income, Sanjay spends 20% on house rent and 70% of the rest on household expenses. If he saves ₹1,800, then his total income is:

Ans ✗ 1. ₹9,000

✗ 2. ₹8,000

✗ 3. ₹10,000

✔ 4. ₹7,500

Q.17 In a row of 48 students facing North, Tinu is 15th from the left end. If Dinesh is 9th to the right of Tinu, what is Dinesh's position from the right end of the line?

Ans ✗ 1. 22nd

✔ 2. 25th

✗ 3. 24th

✗ 4. 23rd

Q.18 Evaluate 297 × 303.

Ans
✗ 1. 90991

✗ 2. 79991

✗ 3. 89091

✓ 4. 89991

Q.19 If a regular polygon has 20 diagonals, then the number of sides of this polygon is:

Ans
✗ 1. 5

✓ 2. 8

✗ 3. 6

✗ 4. 10

Q.20 Select the number from among the given options that can replace the question mark (?) in the following series.

549 525 477 405 309 ?

Ans
✗ 1. 139

✓ 2. 189

✗ 3. 145

✗ 4. 167

Q.21 If each vowel in the word HISTORY is changed to the letter preceding it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order, then how many vowels will be there in the group of letters thus formed?

Ans
✗ 1. 1

✓ 2. 2

✗ 3. 3

✗ 4. 0

Q.22 A diver rowing at the speed of 3 km/h in still water takes double the time going 50 km upstream compared to going 50 km downstream. The speed of the diver against the stream is:

Ans
✗ 1. $\frac{4}{3}$ km/h

✗ 2. $\frac{7}{3}$ km/h

✗ 3. 1 km/h

✓ 4. 2 km/h

Q.23 Which of the following lacks membrane?

Ans
  ✗ 1. Fungi cell

  ✗ 2. Plant cell

  ✗ 3. Animal cell

  ✔ 4. Viruses

Q.24 Which of the following statements is/are correct?

Statements:

I) Electromagnet is a device used to convert magnetic field into electrical energy.

II) Electromagnet is a device used to convert mechanical energy into magnetic energy.

Ans
  ✔ 1. Neither Statement I nor II

  ✗ 2. Both Statements I and II

  ✗ 3. Statement I only

  ✗ 4. Statement II only

Q.25 Which of the following organisms is/are NOT unicellular?

Ans
  ✗ 1. Paramoecium

  ✗ 2. Amoeba

  ✔ 3. Plants

  ✗ 4. Chlamydomonas

Q.26 If each vowel in the word MARKETING is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which of the following letters will be fourth from the left in the group of letters thus formed?

Ans
  ✗ 1. S

  ✗ 2. Q

  ✗ 3. F

  ✔ 4. J

Q.27 In which of the following types of reaction is there an exchange of ions between the reactants?

Ans
  ✔ 1. Double displacement reaction

  ✗ 2. Addition reaction

  ✗ 3. Disproportion reaction

  ✗ 4. Decomposition

Q.28 Which Indian singer was awarded the Padma Bhushan award, one of India's highest civilian awards, for the first time in 2024?

Ans
✔ 1. Usha Uthup

✘ 2. Lata Mangeshkar

✘ 3. Alka Yagnik

✘ 4. Asha Bhosle

Q.29 Magnification produced by a convex mirror for a given object of height 5 cm is 0.2. Here, the height of the image is _____.

Ans
✘ 1. 0.4 cm

✘ 2. 10 cm

✔ 3. 1 cm

✘ 4. 1.5 cm

Q.30 Which of the following organisms does NOT show asexual reproduction by means of fission?

Ans
✔ 1. Earthworm

✘ 2. Plasmodium

✘ 3. Amoeba

✘ 4. Leishmania

Q.31 Find the total surface area of a cylinder whose radius of base is 7 cm and height is 12 cm.

Ans
✘ 1. $303\pi\ cm^2$

✘ 2. $280\pi\ cm^2$

✘ 3. $208\pi\ cm^2$

✔ 4. $266\pi\ cm^2$

Q.32 A, B, E, F, L, M and P are sitting around a circular table, facing the centre. F sits second to the left of E. A sits third to the right of B. M sits third to the left of L. A sits to the immediate right of M. P is not an immediate neighbour of M. Who sits second to the left of F?

Ans
✘ 1. A

✘ 2. B

✘ 3. M

✔ 4. P

Q.33 Which of the following physical quantities represents the rate of change of velocity?

Ans
✗ 1. Speed

✗ 2. Velocity

✓ 3. Acceleration

✗ 4. Distance

Q.34 What is the valency of carbon?

Ans
✗ 1. Three

✓ 2. Four

✗ 3. Two

✗ 4. Six

Q.35 What percentage of the numbers from 1 to 70, both included, have 1 or 7 in the unit's digit?

Ans
✓ 1. 20

✗ 2. 1

✗ 3. 21

✗ 4. 14

Q.36 If the mode of the following data is 7, then find the value of k.
2, 4, 6, 7, 5, 6, 10, 6, 7, 2k + 1, 9, 7, 13

Ans
✗ 1. 2

✗ 2. 4

✗ 3. 6

✓ 4. 3

Q.37 The equivalent resistance of the two resistors of resistance R ohm each connected in series is_____.

Ans
✗ 1. 3R ohm

✗ 2. R/2 ohm

✓ 3. 2R ohm

✗ 4. 2/R ohm

Q.38 _____ has been honoured as an International Anti-Corruption Champion by the US government for the year 2023.

Ans
✓ 1. Nikhil Dey

✗ 2. Anna Hazare

✗ 3. Medha Patkar

✗ 4. Aruna Roy

Q.39 The work done by a constant force of 5 Newton acting on a body is 5 joules. The displacement of the body in the direction of the applied force is _____.

Ans ✗ 1. 100 m

✗ 2. 1000 m

✔ 3. 1m

✗ 4. 10 m

Q.40 When an empty bottle is closed air tight and pushed inside water it bounces back when it is released. This is because _____.

Ans ✗ 1. water does not exert force on an empty bottle

✗ 2. gravitational force on a bottle is equal to the buoyant force of the water

✔ 3. upthrust of water on a bottle is greater than the gravitational force acting on the bottle

✗ 4. gravitational force acting on the bottle is greater than the upthrust of water

Q.41 Which of the following options represents two successive discounts that are equivalent to a single discount of 84%?

Ans ✔ 1. 20% and 80%

✗ 2. 10% and 90%

✗ 3. 40% and 60%

✗ 4. 30% and 70%

Q.42 Which is the internal energy reserve in plants?

Ans ✔ 1. Starch

✗ 2. Sucrose

✗ 3. Glucose

✗ 4. Glycogen

Q.43 According to the law of constant proportion, what will be the correct ratio of obtained oxygen and hydrogen (O : H) after decomposition of 18 g water?

Ans ✗ 1. 2 : 16

✗ 2. 14 : 4

✔ 3. 16 : 2

✗ 4. 4 : 14

Q.44 If $a : b = 3 : 2$ and $b : c = 3 : 2$, then $a : b : c = $?

Ans ✔ 1. 9 : 6 : 4

✗ 2. 6 : 3 : 4

✗ 3. 9 : 4 : 6

✗ 4. 6 : 4 : 3

Q.45 A sells a bicycle to B at a profit of 20% and B sells it to C at a profit of 25%. If C pays ₹1,500, then what did A pay for it?

Ans
 ✗ 1. ₹1,100

 ✔ 2. ₹1,000

 ✗ 3. ₹1,125

 ✗ 4. ₹825

Q.46 If + means −, − means ×, × means ÷, ÷ means +, then what will come in place of the question mark (?) in the following equation?

$22 - 5 \div 3 + 12 \times 3 =?$

Ans
 ✗ 1. 111

 ✔ 2. 109

 ✗ 3. 112

 ✗ 4. 110

Q.47 Jaggu can make one wooden chair in 3 days and Rabbu can make the same chair in 4 days. If they work together, in how many days will they make 14 chairs of the same kind?

Ans
 ✗ 1. 16 days

 ✗ 2. 18 days

 ✗ 3. 20 days

 ✔ 4. 24 days

Q.48 In a certain code language, 'PLOW' is coded as '7164' and 'WOLF' is coded as '1564'. What is the code for 'F' in the given code language?

Ans
 ✗ 1. 7

 ✔ 2. 5

 ✗ 3. 6

 ✗ 4. 1

Q.49 The draft of the 'Telecommunications (Administration of Digital Bharat Nidhi) Rules, 2024' was published for public consultation on which date?

Ans
 ✗ 1. 5 September 2024

 ✗ 2. 1 August 2024

 ✗ 3. 30 June 2024

 ✔ 4. 4 July 2024

Q.50 Who among the following participated in the United Nations 'World Climate Action Summit (COP28)' in Dubai?

Ans ✗ 1. Jagdeep Dhankhar

✓ 2. Narendra Modi

✗ 3. Droupadi Murmu

✗ 4. Ram Nath Kovind

Q.51 The sum of a two-digit number and the number obtained by reversing the digits is 99. If the digits of the number differ by 5, then the two–digit number can be:

Ans ✗ 1. 83

✓ 2. 27

✗ 3. 16

✗ 4. 18

Q.52 Evaluate the given expression.

$13 - 12 \div 4 \times 2$

Ans ✗ 1. 6

✗ 2. 8

✗ 3. 9

✓ 4. 7

Q.53 In the word OPTICAL, each vowel is changed to the letter immediately succeeding it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. Which of the following letters is repeated twice in the new group of letters thus formed?

Ans ✗ 1. P

✗ 2. O

✗ 3. K

✓ 4. B

Q.54 In a certain code language,

A + B means 'A is the mother of B',

A – B means 'A is the brother of B',

A × B means 'A is the wife of B',

A ÷ B means 'A is the father of B',

and A # B means 'A is the daughter of B'.

How is K related to Q if 'P × Q ÷ T + Z – S # K'?

Ans ✗ 1. Wife's brother

✗ 2. Wife's father

✗ 3. Husband's mother

✔ 4. Daughter's husband

Q.55 Indian women team won the Chess Olympiad 2024 title by defeating which of the following teams?

Ans ✔ 1. Azerbaizan

✗ 2. Spain

✗ 3. Taiwan

✗ 4. France

Q.56 In which month was the Guru Kelucharan Mohapatra Awards 2024 organised by the Srjan-Guru Kelucharan Mohapatra Odissi Nrityabasa?

Ans ✗ 1. July

✗ 2. August

✔ 3. September

✗ 4. October

Q.57 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Due to water pipeline work planned in Grant Road for the next 3 days, the road will be closed for traffic till further notice.

Courses of Action:

(I) Traffic police should increase the number of personnel present at Grant Road to physically coordinate traffic diversion effectively.

(II) Traffic police should issue a notification in major newspapers regarding traffic diversions and alternate routes that can be taken by the general public till the Grant Road closure continues.

Ans ✗ 1. Only I follows

✗ 2. Neither I nor II follows

✗ 3. Only II follows

✔ 4. Both I and II follow

Q.58 Which of the following non-metals is a liquid?

Ans ✗ 1. Sulphur

✔ 2. Bromine

✗ 3. Chlorine

✗ 4. Fluorine

Q.59 As of March 2024, what does Morgan Stanley's research forecast for India's GDP growth rate in FY25?

Ans ✗ 1. 12.5%

✗ 2. 0.9%

✔ 3. 6.8%

✗ 4. 2.4%

Q.60 Seven people, B, C, D, E, F, G and K are sitting in a straight line, facing north. Only two people sit to the left of B. Only three people sit between B and K. F sits second to the right of B. Only two people sit between F and C. G sits at some place to the right of E but at some place to the left of D. How many people sit to the right of G?

Ans ✔ 1. Three

✗ 2. Four

✗ 3. One

✗ 4. Two

Q.61 Study the given graph and answer the question that follows.

The graph shows the daily production of TV sets in a factory for 6 days of a week.
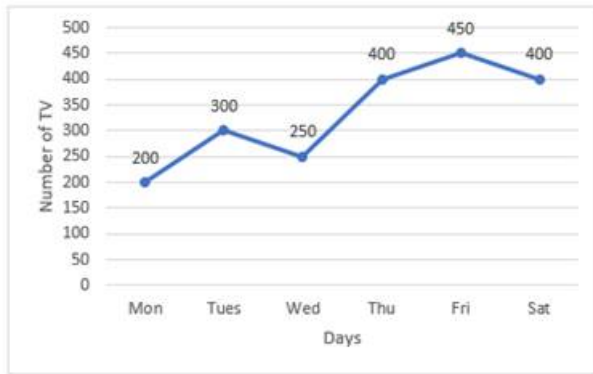
How many units of TV sets were produced on Monday and Tuesday together?

Ans ✗ 1. 700

✗ 2. 400

✗ 3. 600

✔ 4. 500

Q.62 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. VS-PU

✗ 2. RO-LQ

✔ 3. YV-SW

✗ 4. TQ-NS

Q.63 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

JG-NK-RT

EB-IF-MO

Ans ✗ 1. IF-MJ-QR

✗ 2. FC-JG-NO

✗ 3. GD-KI-OQ

✔ 4. HE-LI-PR

Q.64 Which of the following does NOT increase the rate of evaporation?

Ans ✓ 1. Decrease in temperature

✗ 2. Decrease in humidity

✗ 3. Increase in surface area

✗ 4. Increase in wind speed

Q.65 The simplified value of 0.002×0.5 is:

Ans ✗ 1. 0.1

✓ 2. 0.001

✗ 3. 0.01

✗ 4. 0.0001

Q.66 Rohit starts from Point A and drives 25 km towards the East. He then takes a right turn, drives 17 km, turns right and drives 14 km. He then takes a right turn and drives 11 km. He takes a final left turn, drives 11 km and stops at Point P. How far (shortest distance) and towards which direction should he drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)

Ans ✗ 1. 4 km towards the North

✓ 2. 6 km towards the North

✗ 3. 8 km towards the North

✗ 4. 6 km towards the South

Q.67 Shailesh Nayak has been conferred Padma Shri award in 2024 in which field?

Ans ✗ 1. Literature & Education

✗ 2. Medicine

✗ 3. Sports

✓ 4. Science and Engineering

Q.68 A solid metallic sphere of radius 12 cm is melted and recast in the form of small spheres of radius 2 cm. How many small spheres are formed?

Ans ✗ 1. 96

✓ 2. 216

✗ 3. 864

✗ 4. 48

Q.69 ACE is related to BDF in a certain way. In the same way, GIK is related to HJL. To which of the following options is MOQ related, to following the same logic?

Ans ✗ 1. NOP

✔ 2. NPR

✗ 3. OPQ

✗ 4. NPS

Q.70 Other than the nervous system, which other system helps in control and coordination in our body?

Ans ✗ 1. Excretory system

✔ 2. Endocrine system

✗ 3. Respiratory system

✗ 4. Digestive system

Q.71 A tree breaks and falls to the ground such that its upper part is still partially attached to its stem. At what height did it break, if the original height of the tree was 24 m and it makes an angle of 30° with the ground?

Ans ✔ 1. 8 m

✗ 2. 10 m

✗ 3. 9 m

✗ 4. 12 m

Q.72 The successful automotive trials of the Zorawar light tank on 13 September 2024 were an important milestone for India's defence sector. Which organisation is responsible for developing this light tank?

Ans ✗ 1. Hindustan Aeronautics Limited (HAL)

✔ 2. Defence Research and Development Organisation (DRDO)

✗ 3. Indian Army

✗ 4. Bharat Electronics Limited (BEL)

Q.73 Which two numbers should be interchanged to make the given equation correct?

$$186 - 82 + (129 \div 3) - 6 \times 8 + (31 - 19) \times 2 = 85$$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

Ans ✔ 1. 186 and 129

✗ 2. 2 and 6

✗ 3. 82 and 31

✗ 4. 8 and 19

Q.74 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All ropes are chains.

All chains are strings.

Conclusions:

(I) All strings are ropes.

(II) All ropes are strings.

Ans ✗ 1. Only conclusion (I) follows

✗ 2. Neither conclusion (I) nor (II) follows

✗ 3. Both conclusions (I) and (II) follow

✔ 4. Only conclusion (II) follows

Q.75 The arithmetic mean of the observations 39, 49, 59, 60, 70, 80, 90, 93 and 90 is:

Ans ✗ 1. 79

✗ 2. 78

✔ 3. 70

✗ 4. 76

2024/12/02-20:03:23

Test Date	26/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

ACDF, GIJL, MOPR, SUVX, YABD, ?

Ans ✗ 1. EGFJ

✗ 2. EGIK

✗ 3. EFHJ

✔ 4. EGHJ

Q.2 If each vowel in the word PARKING is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order, then which of the following letters will be third from the left in the group of letters thus formed?

Ans ✗ 1. O

✔ 2. S

✗ 3. L

✗ 4. J

Q.3 Three years ago, the average age of a family of six members was 19 years. Since then a boy has been born and the average age of the family is the same today as it was three years ago. What is the age of the boy?

Ans ✗ 1. 1.5 years

✗ 2. 2 years

✔ 3. 1 year

✗ 4. 2.5 years

Q.4 In a certain code language, 'LOBE' is coded as '2653' and 'BORE' is coded as '6823'. What is the code for 'L' in the given code language?

Ans ✗ 1. 3

✗ 2. 8

✗ 3. 2

✔ 4. 5

Q.5 In 2024, which company entered into a Memorandum of Understanding (MoU) with iCreate to promote AI startups in India?

Ans ✗ 1. Google

✗ 2. Meta

✗ 3. Infosys

✔ 4. Microsoft

Q.6 The angle of elevation of the top of a small tree from a point on the ground 300 m away from the foot of the tree was 30°. When the tree grew taller, its angle of elevation became 60° from the same point. By how much did the tree grow?

Ans ✗ 1. $100\sqrt{3}$ m

✗ 2. $\frac{100}{\sqrt{3}}$ m

✔ 3. $200\sqrt{3}$ m

✗ 4. $\frac{200}{\sqrt{3}}$ m

Q.7 If a sum of money doubles itself in 10 years on compound interest, then in how many years will it become 16 times of itself at the same rate of interest?

Ans ✔ 1. 40

✗ 2. 30

✗ 3. 10

✗ 4. 20

Q.8 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 961 :: 34 : Y

Ans ✔ 1. X = 41, Y = 576

✗ 2. X = 47, Y = 729

✗ 3. X = 39, Y = 529

✗ 4. X = 45, Y = 625

Q.9 If $(584)^2 = 3,41,056$, then the value of square root of 34.1056 is:

Ans   ✔ 1. 5.84

   ✘ 2. 0.584

   ✘ 3. 0.0584

   ✘ 4. 0.000584

Q.10 Town L lies to the west of Town M. Town D lies to the northeast of Town L. Town A lies to the west of Town D. Town R lies to the east of Town D. What is the position of Town R with respect to Town L?

Ans   ✘ 1. Southeast

   ✘ 2. Northwest

   ✘ 3. Southwest

   ✔ 4. Northeast

Q.11 Simplify the following expression:

$$(a + 2b - c)(b - c) + (a - c)2b + b^2$$

Ans   ✔ 1. $3b^2 + c^2 + 3ab - 5bc - ac$

   ✘ 2. $3ab - 5bc - ac - 2abc$

   ✘ 3. $3b^2 + 3ab - 5bc - ac$

   ✘ 4. $2b^2 + 3ab - 4bc + c$

Q.12 Which sexually transmitted diseases are caused by a viruses?

Ans   ✘ 1. Warts and AIDS

   ✘ 2. Warts and Gonorrhoea

   ✔ 3. Syphilis and AIDS

   ✘ 4. Gonorrhoea and Syphilis

Q.13 Which of the following statements is INCORRECT about Rutherford's model of an atom?

Ans   ✘ 1. The size of the nucleus is very small as compared to that of the atom.

   ✔ 2. Electrons revolve around the nucleus in elliptical paths.

   ✘ 3. There is a positively charged centre in an atom, which is called the nucleus.

   ✘ 4. Electrons revolve around the nucleus in circular paths.

Q.14 What is the effect of heating on the rate of diffusion?

Ans ✗ 1. It decreases with increase of temperature

✗ 2. There is no effect of temperature on the rate of diffusion.

✔ 3. It increases with increase of temperature

✗ 4. It first increases and then, decreases after some time.

Q.15 India's rank in the Corruption Perceptions Index (CPI) improved from _____ in 2022 to _____ in 2023.

Ans ✗ 1. 85; 40

✗ 2. 40; 39

✗ 3. 93; 85

✔ 4. 85; 93

Q.16 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. A sits fifth from the right end. Only two people sit between E and A. C is an immediate neighbour of G and E. B sits to the immediate right of F. How many people sit between D and B?

Ans ✗ 1. One

✗ 2. Two

✗ 3. Three

✔ 4. Four

Q.17 Which of the following statements is/are correct?

Statements:

I) The mass of an object is the same as its weight.

II) The mass of an object is not the same as its weight.

III) Mass is scalar quantity, whereas weight is vector quantity.

Ans ✗ 1. Statement III

✗ 2. Statements I and III

✔ 3. Statements II and III

✗ 4. Statements I and II

Q.18 The work done in moving 10 coulomb charges across the potential difference of 5 volts is _____.

Ans ✗ 1. 5 joules

✗ 2. 2 joules

✗ 3. 20 joules

✔ 4. 50 joules

Q.19 In October 2023, Prime Minister Narendra Modi formally announced India's interest in bidding for the _____ Olympics at the 141st IOC Session.

Ans ✔ 1. 2036

✘ 2. 2028

✘ 3. 2032

✘ 4. 2040

Q.20 In a certain code language, 'lost in space' is coded as 'vp dc ez' and 'never get lost' is coded as 'gb ez cy'. What is the code for 'lost' in the given code language?

Ans ✘ 1. dc

✔ 2. ez

✘ 3. gb

✘ 4. vp

Q.21 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✘ 1. GMJ

✘ 2. KQN

✘ 3. RXU

✔ 4. BHF

Q.22 Which department's Disaster Management Division organised the conference on 'Experience Sharing and Capacity Building in Disaster Management' in August 2024?

Ans ✘ 1. National Institute of Disaster Management (NIDM)

✘ 2. Ministry of Communications

✘ 3. National Disaster Response Force (NDRF)

✔ 4. Department of Telecommunications (DoT)

Q.23 Which of the following statements is/are correct?

Statements:

I) A current carrying conductor acts like a magnet.

II) Moving electrons perpendicular to the magnetic field do not experience any force.

Ans ✗ 1. Both Statements I and II

✗ 2. Statement II only

✗ 3. Neither Statement I nor II

✔ 4. Statement I only

Q.24 Select the set, from the given options, in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(11, 44, 2)

(6, 54, 3)

Ans ✗ 1. (12, 72, 3)

✗ 2. (10, 50, 5)

✔ 3. (2, 32, 4)

✗ 4. (7, 98, 2)

Q.25 The highest common factor of a set of coprime numbers is equal to:

Ans ✗ 1. the highest among them

✗ 2. 2

✗ 3. the lowest among them

✔ 4. 1

Q.26 A trader lost 20% by selling a watch for ₹1,024. What percentage will he gain by selling it for ₹1,472?

Ans ✔ 1. 15%

✗ 2. 12%

✗ 3. 20%

✗ 4. 10%

Q.27 Why does carbon make a stable compound?

Ans ✗ 1. Due to big size carbon forms strong bonds.

✗ 2. Due to higher electronegativity carbon forms strong bonds.

✔ 3. Due to small size carbon forms strong bonds.

✗ 4. Due to higher enthalpy carbon forms strong bonds.

Q.28 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All bees are insects.

All bees are hives.

Conclusions:

(I) Some hives are insects.

(II) All hives are bees.

Ans ✗ 1. Only conclusion (II) follows

✔ 2. Only conclusion (I) follows

✗ 3. Both conclusions (I) and (II) follow

✗ 4. Neither conclusion (I) nor (II) follows

Q.29 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

61 D 39 C 14 C (62 A 2) B 4 =?

Ans ✗ 1. 110

✗ 2. 180

✗ 3. 145

✔ 4. 160

Q.30 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BDG, DFI, FHK, HJM, JLO, ?

Ans ✔ 1. LNQ

✗ 2. POR

✗ 3. NLQ

✗ 4. OPR

Q.31 The average of the first 30 natural numbers is:

Ans ✔ 1. 15.5

✗ 2. 15

✗ 3. 16.5

✗ 4. 16

Q.32 What constant speed should be maintained in order to reach a distance of 600 km in 10 hrs?

Ans ✗ 1. 85 km/h

✗ 2. 80 km/h

✔ 3. 60 km/h

✗ 4. 50 km/h

Q.33 When 10% of the inhabitants of a village died of cholera, a panic set in, during which 25% of the remaining inhabitants left the village. The population then reduced to 4050. Find the number of original inhabitants.

Ans ✗ 1. 7000

✗ 2. 5000

✗ 3. 8000

✔ 4. 6000

Q.34 In our body, brain and spinal cord together constitute the:

Ans ✗ 1. peripheral nervous system

✗ 2. endocrine system

✔ 3. central nervous system

✗ 4. autonomic nervous system

Q.35 In the word BLEACH, each consonant is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order. Which of the following letters is repeated twice in the new group of letters thus formed?

Ans ✗ 1. K

✗ 2. F

✔ 3. B

✗ 4. A

Q.36 The relation between focal length 'f', object distance 'u' and image distance 'v' in the case of reflection of light by a spherical mirror is given by _____.

Ans ✗ 1. $1/f = (1/v) - (1/u)$

✗ 2. $1/f = (uv)/(u+v)$

✗ 3. $1/f = (1/u) - (1/v)$

✓ 4. $1/f = (1/u) + (1/v)$

Q.37 Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. G is kept third from the bottom. Only two boxes are kept between C and E. A is kept immediately above D. D is kept at one of the positions above G. Only two boxes are kept between B and E. B is not kept at the top-most position.

How many boxes are kept between D and B?

Ans ✓ 1. Three

✗ 2. Four

✗ 3. One

✗ 4. Two

Q.38 The Sangameshwara Temple had been submerged in the backwaters of the Srisailam project due to heavy rainfall in the monsoon of 2024. This temple lies on the banks of which river?

Ans ✓ 1. Krishna

✗ 2. Narmada

✗ 3. Ganga

✗ 4. Yamuna

Q.39 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. WA-PT

✗ 2. GK-ZD

✓ 3. VZ-TX

✗ 4. CG-VZ

Q.40 If 25 : x :: x : 36, and x > 0, then what is the value of x?

Ans ✗ 1. 21

✗ 2. 27

✗ 3. 18

✓ 4. 30

Q.41 The angles of a quadrilateral are in the ratio 2 : 5 : 7 : 10. Find the difference between the greatest and the smallest angles of the quadrilateral.

Ans ✗ 1. 180°

✔ 2. 120°

✗ 3. 50°

✗ 4. 60°

Q.42 Which of the following statements is INCORRECT regarding metals?

Ans ✗ 1. Metals have to be drawn into thin wires.

✗ 2. Metals are good conductors of heat.

✗ 3. Metals, in their pure state, have a shining surface.

✔ 4. Lead and mercury are comparatively good conductors of heat.

Q.43 Select the correct pair from the following options.

Ans ✔ 1. Object's resistance to change its state of motion—Inertia

✗ 2. Object's resistance to change its state of motion—Acceleration

✗ 3. Object's resistance to change its state of motion—Gravitation

✗ 4. Object's resistance to change its state of motion—Momentum

Q.44 CYBS is related to GWFQ in a certain way based on the English alphabetical order. In the same way, KUJO is related to OSNM. To which of the following options is SQRK related, following the same logic?

Ans ✗ 1. UOWH

✗ 2. UPVH

✗ 3. VNWJ

✔ 4. WOVI

Q.45 Select the number from among the given options that can replace the question mark (?) in the following series.

184 242 275 333 366 424 ?

Ans ✗ 1. 426

✔ 2. 457

✗ 3. 478

✗ 4. 464

**Q.46** In which of the following are CFCs NOT used?

Ans ✗ 1. Refrigerators

✔ 2. Fire extinguishers

✗ 3. Aerosol sprays

✗ 4. Grinders

Q.47 The radius of a cylinder is 5 cm more than its height. If the curved surface area of the cylinder is 792 cm^2, then the volume of the cylinder (in cm^3), is _____ . [Use $\pi = \frac{22}{7}$]

Ans ✗ 1. 5712

✗ 2. 5254

✗ 3. 5306

✔ 4. 5544

Q.48 Study the given graph and answer the question that follows.

The graph shows the number of students involved in different after-school activities.
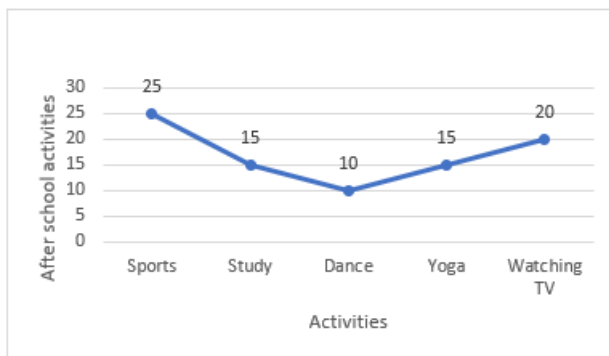
What is the average number of students participating in Sports and Yoga?

Ans ✗ 1. 30

✔ 2. 20

✗ 3. 50

✗ 4. 40

Q.49 Ravi and Kumar are working on an assignment. Ravi takes 6 hours to type 32 pages on a computer, while Kumar takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages?

Ans ✔ 1. 8 hours 15 minutes

✗ 2. 8 hours 25 minutes

✗ 3. 8 hours

✗ 4. 7 hours 30 minutes

Q.50 In a certain code language,

A + B means 'A is the mother of B',

A − B means 'A is the brother of B',

A × B means 'A is the wife of B' and

A ÷ B means 'A is the father of B'.

Based on the above, how is Q related to T if 'P + Q − R × S ÷ T'?

Ans ✗ 1. Brother

✔ 2. Mother's brother

✗ 3. Father's brother

✗ 4. Mother's mother

Q.51 Which two numbers should be interchanged to make the given equation correct?

$46 + 24 − (12 + 19) × 2 + 38 × 6 + 44 ÷ 4 = 262$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

Ans ✔ 1. 24 and 44

✗ 2. 2 and 4

✗ 3. 6 and 2

✗ 4. 24 and 38

Q.52 Which of the following organisations is responsible for the development of the Long-Range Glide Bomb (LRGB), GAURAV, tested in August 2024?

Ans ✗ 1. Hindustan Aeronautics Limited (HAL)

✗ 2. Indian Space Research Organisation (ISRO)

✗ 3. Indian Navy

✔ 4. Defence Research and Development Organisation (DRDO)

Q.53 Magnification produced by a spherical mirror is equal to _____.

Ans ✗ 1. Object distance × image distance

✔ 2. $\dfrac{Height\,of\,the\,image}{Height\,of\,the\,object}$

✗ 3. $\dfrac{Object\,distance}{Image\,distance}$

✗ 4. Height of the image × height of the object

Q.54 Select the INCORRECT pair regarding Asexual reproduction

Ans   ✗ 1. Yeast – spore formation

   ✗ 2. Plasmodium – multiple fission

   ✔ 3. Hydra – multiple fission

   ✗ 4. Leishmania – binary fission

Q.55 The book authored by Vijay Lokpally on Virat Kohli in the year 2023 is

_____.

Ans   ✗ 1. The Cover Shot: The Virat Kohli Story (Revised and Updated World Cup Edition)

   ✗ 2. The Straight Drive: The Virat Kohli Story (Revised and Updated World Cup Edition)

   ✗ 3. The Cover Drive: The Virat Kohli Story (Revised and Updated World Cup Edition)

   ✔ 4. Driven: The Virat Kohli Story (Revised and Updated World Cup Edition)

Q.56 Select the correct balanced equation option for the reaction $Fe + H_2O \rightarrow Fe_3O_4 + H_2$.

Ans   ✗ 1. $2Fe + 4H_2O \rightarrow Fe_3O_4 + 4H_2$

   ✗ 2. $4Fe + 4H_2O \rightarrow Fe_3O_4 + 4H_2$

   ✔ 3. $3Fe + 4H_2O \rightarrow Fe_3O_4 + 4H_2$

   ✗ 4. $3Fe + 4H_2O \rightarrow Fe_3O_4 + 2H_2$

Q.57 Given below is a cause followed by three effects numbered I, II and III. Read the cause carefully and decide which of the three can be a/the possible effect(s).

Cause - A major train accident occurred at Katpadi Junction last night, where seven bogies of G.T. Express derailed and fell across the tracks.

Effect I - Many trains on the Katpadi - Chennai route are running several hours late today.

Effect II - Long queues were seen at the railway ticket booking counters in Bangalore.

Effect III - Railways has decided to run two holiday special trains between Kolkata and Patna from October to December 2023.

Ans   ✗ 1. Both II and III are possible effects.

   ✗ 2. Both I and II are possible effects.

   ✔ 3. Only I is a possible effect.

   ✗ 4. Only II is a possible effect.

Q.58 IIT Bombay and _____ have partnered to develop India's first Quantum Diamond Microchip Imager.

Ans   ✓ 1. TCS

✗ 2. Google

✗ 3. L&T

✗ 4. Mahindra and Mahindra

Q.59 Which of the following statements refer/s to the law of conservation of energy?

Statements:

I) Energy can be converted from one form to another form of energy.

II) Energy can neither be created nor destroyed.

Ans   ✗ 1. Only Statement II

✗ 2. Only Statement I

✗ 3. Neither Statement I nor II

✓ 4. Both Statements I and II

Q.60 DEF is related to CDE in a certain way. In the same way, MNO is related to LMN. To which of the following options is UVW related, following the same logic?

Ans   ✗ 1. FDE

✓ 2. TUV

✗ 3. FED

✗ 4. EFD

Q.61 A, B, C, D, E and F are sitting around a circular table facing the centre. E sits to the immediate right of D. A is an immediate neighbour of B and D. F sits second to the right of D. What is the position of C with respect to D?

Ans   ✗ 1. Immediate left

✗ 2. Second to the right

✗ 3. Second to the left

✓ 4. Third to the left

Q.62 Who coined the term 'protoplasm' for the fluid substance of the cell?

Ans   ✗ 1. Robert Hooke

✓ 2. Purkinje

✗ 3. Robert Brown

✗ 4. Virchow

Q.63 In the word HYPNOTIC, each letter of the word is changed to the letter immediately succeeding it in the English alphabetical order and then the new group of letters thus formed is rearranged according to the English alphabetical order. Which letter is second to the left in the new rearranged group of letters?

Ans ✗ 1. D

✔ 2. I

✗ 3. J

✗ 4. O

Q.64 The sum of the length, the breadth and the height of a cuboid is 38 cm and the length of its diagonal is 22 cm. Find the total surface area of the cuboid.

Ans ✗ 1. 432 cm^2

✗ 2. 864 cm^2

✔ 3. 960 cm^2

✗ 4. 480 cm^2

Q.65 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All oceans are rivers.

Some rivers are ponds.

Conclusions:

(I) All ponds are oceans.

(II) Some oceans are ponds.

Ans ✗ 1. Both conclusions (I) and (II) follow.

✗ 2. Only conclusion (II) follows.

✗ 3. Only conclusion (I) follows.

✔ 4. Neither conclusion (I) nor (II) follows.

Q.66 The tax on a commodity is reduced by 10%, but its consumption is increased by 20%. The percentage increase in the tax revenue derived from it is:

Ans ✗ 1. 15%

✗ 2. 20%

✔ 3. 8%

✗ 4. 10%

Q.67 From a 2.25-litre mango drink bottle, how many small glasses of 45 ml can be filled?

Ans
- ✗ 1. 55
- ✗ 2. 45
- ✔ 3. 50
- ✗ 4. 40

Q.68 Which of the following will be formed when dilute hydrochloric acid is added to a beaker having copper oxide?

Ans
- ✗ 1. A solution with green colour is formed due to the formation of copper (II) chloride.
- ✔ 2. A solution with blue-green colour is formed due to the formation of copper (II) chloride.
- ✗ 3. A colourless solution is formed due to the formation of copper (II) chloride.
- ✗ 4. A solution with blue-green colour is formed due to the formation of copper (III) chloride.

Q.69 The 2024 philately scholarship scheme was launched by the Department of Posts under the _____.

Ans
- ✗ 1. Pradhan Mantri Kaushal Vikas Yojana
- ✗ 2. Sarva Shiksha Abhiyan
- ✗ 3. Digital India Program
- ✔ 4. Deen Dayal SPARSH Yojan

Q.70 Which organelle is found ONLY in plant cells?

Ans
- ✗ 1. Nucleus
- ✔ 2. Mitochondria
- ✗ 3. Chloroplast
- ✗ 4. Lysosome

Q.71 Two angles are complementary. The larger angle is 6° less than five times the measure of the smaller angle. What is the measure of the larger angle?

Ans
- ✗ 1. 66°
- ✗ 2. 63°
- ✔ 3. 74°
- ✗ 4. 87°

Q.72 Amita is 2 years older than her friend Amrita. Amita's father is twice as old as Amita, and Amrita is twice as old as her sister. The ages of Amita's father and Amrita's sister differ by 43 years. The sum of the ages (in years) of Amita and Amrita is:

Ans
✗ 1. 64

✗ 2. 68

✗ 3. 50

✔ 4. 54

Q.73 The particles size of a solution is:

Ans
✗ 1. smaller than 100 nm in diameter

✗ 2. smaller than 52 nm in diameter

✗ 3. smaller than 28 nm in diameter

✔ 4. smaller than 1 nm in diameter

Q.74 An article is sold for ₹x after offering two successive discounts of 25% and 8% on its marked price of ₹500. The value of x is:

Ans
✗ 1. 300

✗ 2. 285

✗ 3. 280

✔ 4. 345

Q.75 In 2023, 'Garba' was declared as an intangible cultural heritage by UNESCO. Which of the following states is Garba from?

Ans
✗ 1. Kerala

✔ 2. Gujarat

✗ 3. West Bengal

✗ 4. Assam

Test Date	27/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 The monthly income of a person is ₹13,500, and his monthly expenditure is ₹9,000. Approximately what percentage of his monthly income does he save monthly?

Ans ✔ 1. 33.33%

✘ 2. 25%

✘ 3. 28.57%

✘ 4. 21%

Q.2 5118 is divisible by:

Ans ✔ 1. 6

✘ 2. 7

✘ 3. 5

✘ 4. 8

Q.3 According to the 2024-25 Indian Union Budget, the Government has allocated increased funding towards schemes like 'Sambal' from ₹462 crore in the previous fiscal year to ____.

Ans ✘ 1. ₹523 crore

✘ 2. ₹453 crore

✔ 3. ₹629 crore

✘ 4. ₹756 crore

Q.4 A, B, C, D, E and F are sitting around a circular table facing the centre. A sits second to the right of E. F is the immediate neighbour of D and E. C sits second to the left of B.

What is the position of F with respect to C?

Ans ✗ 1. Third to the left

✗ 2. Third to the right

✔ 3. Second to the left

✗ 4. Immediate right

Q.5 What sum will earn a simple interest of ₹480 in 3 years at 16% per year rate of interest?

Ans ✗ 1. ₹1,200

✗ 2. ₹800

✔ 3. ₹1,000

✗ 4. ₹600

Q.6 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 7 8 & $ & 2 @ % 4 6 3 Ω £ 5 1 9 # * (Right)

How many such numbers are there, each of which is immediately preceded by a symbol and also immediately followed by a symbol?

Ans ✔ 1. One

✗ 2. Zero

✗ 3. Two

✗ 4. More than two

Q.7 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. Only two people sit to the right of C. Only two people sit between D and C. A sits to the immediate right of D. E sits to the immediate left of G. B sits second to the left of A.

How many people sit between B and F?

Ans ✔ 1. Two

✗ 2. Three

✗ 3. Four

✗ 4. One

Q.8 The average of 10 observations is 46. It was realised later that an observation was misread as 42 in place of 142. Find the correct average.

Ans ✗ 1. 65

✔ 2. 56

✗ 3. 54

✗ 4. 45

Q.9 A body of mass m is taken from the ground to a height h, the gravitational potential energy of the body will be:

Acceleration due to gravity is g.

Ans ✗ 1. mg/h
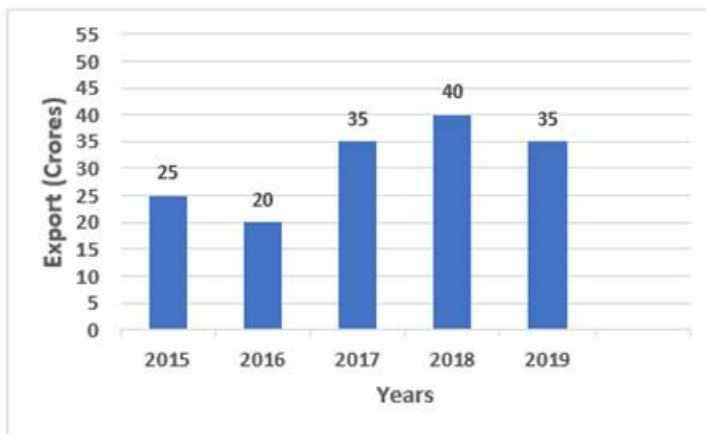
✗ 2. m x g

✔ 3. mgh

✗ 4. m x h

Q.10 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

TVX, SUW, RTV, QSU, ?

Ans ✗ 1. RTP

✔ 2. PRT

✗ 3. PTR

✗ 4. RPT

Q.11 Study the following graph and answer the given question.

The following bar graph shows annual exports (in crore) of a company during the period 2015 to 2019.

What is the average export (in crore) of the year 2016 and 2018?

Ans ✗ 1. 60

✗ 2. 90

✔ 3. 30

✗ 4. 70

Q.12 In 2024, the Royal Australian Air Force debuted its combat aircraft in India during Exercise Tarang Shakti at which location?

Ans ✔ 1. Air Force Station, Jodhpur

✘ 2. Air Force Station, Gwalior

✘ 3. Air Force Station, Agra

✘ 4. Air Force Station, Pune

Q.13 Identify one example of change taking place at puberty that can signify sexual maturation.

Ans ✘ 1. Mood swings

✘ 2. Increase in height

✔ 3. New hair-growth patterns

✘ 4. Behaving differently

Q.14 What type of reaction takes place when calcium oxide reacts vigorously with water to produce slaked lime?

Ans ✔ 1. Combination reaction

✘ 2. Decomposition reaction

✘ 3. Displacement reaction

✘ 4. Double displacement reaction

Q.15 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

55 C 7 D 54 A 9 B 8=?

Ans ✔ 1. 14

✘ 2. 34

✘ 3. 41

✘ 4. 24

Q.16 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

JFH, KGI, LHJ, MIK, ?

Ans ✘ 1. JLN

✔ 2. NJL

✘ 3. JNL

✘ 4. NLJ

Q.17 If the radius of a sphere is increased by 50%, find the percent increase in the surface area.

Ans ✔ 1. 125%

✘ 2. 115%

✘ 3. 100%

✘ 4. 95%

Q.18 If the perimeter of one face of a cube is 48 cm, then its volume is:

Ans ✘ 1. 729 cm^3

✘ 2. 512 cm^3

✔ 3. 1728 cm^3

✘ 4. 1024 cm^3

Q.19 The value of $(256)^{0.16} \times (256)^{0.09}$ is:

Ans ✔ 1. 4

✘ 2. 64

✘ 3. 256

✘ 4. 16

Q.20 If A means +, B means −, C means ×, D means ÷, then what will come in place of the question mark (?) in the following equation?

10 B 27 D 9 A 4 C 3 = ?

Ans ✔ 1. 19

✘ 2. 20

✘ 3. 17

✘ 4. 18

Q.21 Justify the given statement.

'Plants have low energy needs'.

Ans ✘ 1. Plant bodies have a small proportion of dead cells in many tissues.

✘ 2. As the plants use relatively fast transport systems.

✔ 3.
Energy needs differ between different body designs. Plants do not move and have a large proportion of dead cells in many tissues.

✘ 4. Because plants are autotropic organisms and prepare their own food.

Q.22 Who among the following is the author of the book 'I Have the Streets – A Kutty Cricket Story'?

Ans
- ✓ 1. Ravichandran Ashwin
- ✗ 2. Sachin Tendulkar
- ✗ 3. Kuldeep Yadav
- ✗ 4. Sourav Ganguly

Q.23 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 523 :: 9 : Y

Ans
- ✗ 1. $X = 9, Y = 294$
- ✗ 2. $X = 15, Y = 286$
- ✓ 3. $X = 11, Y = 225$
- ✗ 4. $X = 13, Y = 250$

Q.24 What is the mode of reproduction used in the methods such as layering or grafting to grow many plants like sugarcane, roses, or grapes for agricultural purposes?

Ans
- ✓ 1. Vegetative propagation
- ✗ 2. Regeneration
- ✗ 3. Spore formation
- ✗ 4. Fragmentation

Q.25 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Despite the teacher's several warnings, a student was caught cheating in the exam.

Courses of Action:

I. The student should be expelled from the exam, and his paper should be cancelled.

II. The teacher should leave the student with another warning.

Ans
- ✓ 1. Only I follows.
- ✗ 2. Both I and II follow.
- ✗ 3. Neither I nor II follows.
- ✗ 4. Only II follows.

Q.26 A 3-digit number is such that the units' digit, the tens' digit and the hundreds' digit are in the ratio 1 : 2 : 3. The sum of this number and the number obtained by writing its digits in reverse order is 1332. Find the number.

Ans ✗ 1. 123

✗ 2. 246

✗ 3. 414

✔ 4. 963

Q.27 In a certain code language,

'A + B' means 'A is the mother of B',

'A − B' means 'A is the brother of B',

'A x B' means 'A is the wife of B' and

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M − N ÷ P + S x T'?

Ans ✗ 1. Wife's mother's mother's father

✗ 2. Wife's father's father's brother

✔ 3. Wife's mother's father's brother

✗ 4. Wife's father's brother

Q.28 The pattern of the magnetic field lines produced by a current carrying conductor:

Ans ✗ 1. depends on the length of the conductor

✗ 2. is independent of anything related to the conductor

✗ 3. depends on the thickness of the conductor

✔ 4. depends on the shape of the conductor

Q.29 Who among the following was appointed as Minister of Health and Family Welfare in June 2024?

Ans ✗ 1. Shivraj Singh Chouhan

✗ 2. Manohar Lal

✔ 3. Jagat Prakash Nadda

✗ 4. Sarbananda Sonowal

Q.30 In a row of people, all facing north, Bunty is 8th from the left end. Sneha is 15th from the left end. Sneha is exactly between Bunty and Nupur. If Nupur is 7th from the right end of the line, how many people are there in the row?

Ans ✗ 1. 20

✗ 2. 22

✗ 3. 26

✔ 4. 28

Q.31 The average of the first twelve multiples of 11 is:

Ans ✔ 1. 71.5

✗ 2. 68.5

✗ 3. 70.5

✗ 4. 69.5

Q.32 How many electrons does carbon typically share when bonding with another carbon atom or with atoms of other elements?

Ans ✗ 1. 2

✗ 2. 1

✗ 3. 6

✔ 4. 4

Q.33 What is the primary purpose of the Artara'24 Fine Arts Exhibition and Competition?

Ans ✗ 1. To conduct art workshops

✔ 2. To discover and nurture emerging artistic talents

✗ 3. To sell artworks

✗ 4. To promote art tourism

Q.34 A cubic wooden block of side 2 m is lying on a tabletop. If the mass of the wooden block is 10 kg, then the pressure exerted by the wooden block on the tabletop is: (consider g = 10 m/ s^2)

Ans ✗ 1. 30 N m^{-2}

✔ 2. 25 N m^{-2}

✗ 3. 20 N m^{-2}

✗ 4. 15 N m^{-2}

Q.35 Which of the following is an example of a heterogeneous mixture?

Ans ✗ 1. Sugar dissolved in water

✔ 2. Oil dissolved in water

✗ 3. Copper sulphate powder dissolved in water

✗ 4. Salt dissolved in water

Q.36 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 711 :: 146 : Y

Ans ✔ 1. X = 252, Y = 393

✗ 2. X = 218, Y = 456

✗ 3. X = 237, Y = 418

✗ 4. X = 269, Y = 379

Q.37 A shopkeeper bought an article for ₹319.60. Approximately, at what price should he sell the article to make a 25% profit?

Ans ✔ 1. ₹400

✗ 2. ₹450

✗ 3. ₹500

✗ 4. ₹600

Q.38 In a certain code language, 'GIRL' is coded as '1539' and 'ROSE' is coded as '6825'. What is the code for 'R' in the given code language?

Ans ✗ 1. 3

✗ 2. 8

✗ 3. 6

✔ 4. 5

Q.39 1 C charge contains:

Ans ✔ 1. 6×10^{18} electrons

✗ 2. 6×10^{17} electrons

✗ 3. 6×10^{20} electrons

✗ 4. 6×10^{19} electrons

Q.40 If ₹2,400 is to be distributed between A and B in the ratio of 7 : 5 , then the share of A is:

Ans ✔ 1. ₹1,400

✗ 2. ₹1,000

✗ 3. ₹1,300

✗ 4. ₹1,600

Q.41 How much venture capital fund would be set up for space economy in India as announced by the Finance Minister in the Annual Financial Statement 2024-25?

Ans ✗ 1. ₹500 crore

✔ 2. ₹1,000 crore

✗ 3. ₹700 crore

✗ 4. ₹1,500 crore

Q.42 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some snakes are lizards.

All roosters are lizards.

Conclusions:

(I) All lizards are roosters.

(II) No roosters are snakes.

Ans ✗ 1. Only conclusion (II) follows.

✔ 2. Neither conclusion (I) nor (II) follows.

✗ 3. Only conclusion (I) follows.

✗ 4. Both conclusions (I) and (II) follow.

Q.43 Which gas is passed through calcium hydroxide to form calcium carbonate and water?

Ans ✗ 1. Hydrogen gas

✗ 2. Oxygen gas

✗ 3. Helium gas

✔ 4. Carbon-dioxide gas

Q.44 IMOL is related to PTVS in a certain way based on the English alphabetical order. In the same way, FJLI is related to MQSP. To which of the following options is KOQN related, following the same logic?

Ans ✗ 1. QUWX

✗ 2. RUVX

✗ 3. QUWT

✔ 4. RVXU

Q.45 Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which pair does NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

Ans ✗ 1. TV – YA

✔ 2. YD – WD

✗ 3. LN – QS

✗ 4. RT – WY

Q.46 What happens when we increase the temperature of solids?

Ans ✗ 1. The kinetic energy of the particles will decrease.

✗ 2. No effect of temperature on solids.

✗ 3. The shape of the solid will remain same.

✔ 4. The kinetic energy of the particles will increase.

Q.47 Which of the following statements regarding an atom is correct?

Ans ✗ 1. An atom does not contain any positive charge

✗ 2. Atoms are partially electrically neutral.

✗ 3. Atoms are not electrically neutral.

✔ 4. Atoms as a whole are electrically neutral.

Q.48 Under the NPS Vatsalya scheme, subsequent contribution of what minimum amount is required per annum with no maximum limit?

Ans ✔ 1. ₹1,000

✗ 2. ₹500

✗ 3. ₹2,500

✗ 4. ₹5,000

Q.49 A train travelling at a speed of 45 km/h crosses a pole in 24 sec. What is the length of the train?

Ans ✗ 1. 125 m

✗ 2. 30 m

✓ 3. 300 m

✗ 4. 1.5 m

Q.50 If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same work in 2 days, then the time taken by 20 men for doing the same piece of work will be:

Ans ✗ 1. 3 days

✗ 2. 4 days

✓ 3. 5 days

✗ 4. 2 days

Q.51 An article is marked at 50% above its cost price. If the marked price of the article is ₹1,500, then the cost price of the article is:

Ans ✗ 1. ₹800

✗ 2. ₹750

✓ 3. ₹1,000

✗ 4. ₹1,200

Q.52 When a thick glass slab is placed over printed matter, they appear to be _____ and this is due to _____ of light.

Ans ✓ 1. raised; refraction

✗ 2. lowered; reflection

✗ 3. raised; reflection

✗ 4. lowered; refraction

Q.53 Which of the following controls bladder pressure?

Ans ✗ 1. Blood Pressure

✗ 2. Kidneys

✓ 3. Nervous system

✗ 4. Heart

Q.54 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 3 Ω 9 # 1 4 6 @ 8 S 2 & % 7 & * £ 5 (Right)

How many such numbers are there, each of which is immediately preceded by a number and also immediately followed by a symbol?

Ans ✗ 1. More than two

✓ 2. One

✗ 3. Zero

✗ 4. Two

Q.55 Sumit travelled 10 km 120 m by scooter, 1 km 970 m on foot and 15 km 850 m by bus. What is the total distance travelled by Sumit?

Ans ✓ 1. 27 km 940 m

✗ 2. 27 km 930 m

✗ 3. 27 km 950 m

✗ 4. 27 km 920 m

Q.56 Which gland secretes Adrenaline?

Ans ✗ 1. Pituitary gland

✗ 2. Thyroid gland

✗ 3. Pineal gland

✓ 4. Adrenal gland

Q.57 _____ has been awarded the title of India's Fastest Growing Sustainable Brand for 2023-24.

Ans ✓ 1. Gruner Renewable Energy

✗ 2. Adani Green Energy

✗ 3. Tata Renewable Energy

✗ 4. Suzlon Energy

Q.58 Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which pair does NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

Ans ✗ 1. QL – SN

✗ 2. EZ – GB

✗ 3. KF – MH

✓ 4. LH – QM

Q.59 In 2024, what has been the main focus of the pavilions displayed at the India Art, Architecture, and Design Biennale?

Ans   ✔ 1. Contemporary art and innovative designs

       ✘ 2. Interactive technology exhibits

       ✘ 3. Indian film and photography

       ✘ 4. Traditional crafts and modern architecture

Q.60 What is used to make drinking water free from germs?

Ans   ✔ 1. Bleaching powder

       ✘ 2. Washing soda

       ✘ 3. Sodium hydroxide

       ✘ 4. Baking soda

Q.61 Where does the following reaction take place in a cell? The breakdown of glucose, a six-carbon molecule, into a three-carbon molecule.

Ans   ✘ 1. In the Golgi apparatus

       ✘ 2. In the nucleus

       ✔ 3. In the cytoplasm

       ✘ 4. In the mitochondria

Q.62 A's salary is 20% less than B's salary. By what percentage is B's salary more than A's salary?

Ans   ✘ 1. 15%

       ✘ 2. 20%

       ✔ 3. 25%

       ✘ 4. 17%

Q.63 Which of the following teams was the winner of the 10th season of Pro Kabaddi League?

Ans   ✘ 1. Haryana Steelers

       ✔ 2. Puneri Paltan

       ✘ 3. Patna Pirates

       ✘ 4. Pink Panthers

Q.64 In a certain code language, 'SOLVE' is coded as '36598', 'STORE' is coded as '39164', and 'WHOLE' is coded as '27689'. What is the code for 'V' in the given code language?

Ans
✗ 1. 3

✗ 2. 8

✔ 3. 5

✗ 4. 9

Q.65 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) @ 6 8 $ 9 # 1 * £ 4 7 & 2 & % 3 Ω 5 (Right)

How many such numbers are there, each of which is immediately preceded by a number and also immediately followed by a symbol?

Ans
✗ 1. More than two

✗ 2. Zero

✗ 3. One

✔ 4. Two

Q.66 Which of the following options should come in place of the question mark (?) in the given series?

14 15 18 23 30 ?

Ans
✗ 1. 40

✗ 2. 37

✗ 3. 41

✔ 4. 39

Q.67 Anita starts from her house at Point A and walks 5 m towards South. She takes a right turn, walks 7 m, takes another right and walks 12 m and stops at point P. If a pole is placed 7 m towards East from where she stopped (Point P), how far (shortest distance) and in which direction will her house be from the pole? (All turns are 90 degrees turns only unless specified.)

Ans
✗ 1. 5 m towards the North

✔ 2. 7 m towards the South

✗ 3. 12 m towards the South

✗ 4. 7 m towards the East

Q.68 What is the product of $(x + a)$ and $(x + b)$?

Ans
✗ 1. $x^2 + (a + b)x - ab$

✗ 2. $x^2 + (a - b)x - ab$

✔ 3. $x^2 + (a + b)x + ab$

✗ 4. $x^2 + (a - b)x + ab$

Q.69 The sum of the ages of a mother, son and daughter is 70 years. If the mother is thrice as old as her son, and the daughter is 5 years older than her brother, how old is the mother?

Ans ✗ 1. 45 years

✗ 2. 35 years

✔ 3. 39 years

✗ 4. 42 years

Q.70 If $\sec 4A = \csc(3A - 50°)$, where $4A$ and $3A$ are acute angles, find the value of $\csc(A + 25°)$.

Ans ✔ 1. $\sqrt{2}$

✗ 2. 1

✗ 3. $\frac{1}{\sqrt{2}}$

✗ 4. 0

Q.71 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

No horses are mirrors.

Some lizards are horses.

Conclusions:

(I) Some horses are not lizards.

(II) Some lizards are not mirrors.

Ans ✗ 1. Neither conclusion (I) nor (II) follows

✔ 2. Only conclusion (II) follows

✗ 3. Both conclusions (I) and (II) follow

✗ 4. Only conclusion (I) follows

Q.72 An object is placed at distance of 20cm in front of a concave mirror and it's image is formed at a distance of 60cm on the same side as the object, the magnification produced by the mirror will be:

Ans ✗ 1. +3

✗ 2. -1/3

✗ 3. +1/3

✔ 4. -3

Q.73 When there are two parallel lines cut by a transversal, which of the following is true?

a) Corresponding angles are equal.

b) Alternate interior angles are supplementary.

c) Consecutive angles on the same side of the transversal are equal.

d) Alternate interior angles are equal.

Ans ✔ 1. a and d

✘ 2. Only b

✘ 3. b and c

✘ 4. Only a

Q.74 CKQR is related to FITP in a certain way based on the English alphabetical order. In the same way, WERN is related to ZCUL. To which of the following options is BOLJ related, following the same logic?

Ans ✘ 1. DMNJ

✘ 2. DNOK

✔ 3. EMOH

✘ 4. FNNH

Q.75 Which of the following is the unit of acceleration?

Ans ✘ 1. ms

✔ 2. m/s^2

✘ 3. m/s

✘ 4. $m\, s^2$

2024/12/02-21:43:07

Test Date	27/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 Which cell has changing shapes?

Ans ✗ 1. Ovum

✔ 2. Amoeba

✗ 3. Nerve cell

✗ 4. Smooth muscle

Q.2 What recent decision did the Union Cabinet make regarding the Ayushman Bharat PM-JAY scheme on 11 September 2024?

Ans ✗ 1. To increase the coverage amount for all citizens

✔ 2. To extend benefits to all citizens aged 70 and above

✗ 3. To discontinue the scheme

✗ 4. To limit coverage to only low-income families

Q.3 Which of the following singers was awarded the Padma Shri in 2024 for his significant contributions to Himachali folk and classical music?

Ans ✔ 1. Som Datt Battu

✗ 2. Hansraj Raghuwanshi

✗ 3. Mohit Chauhan

✗ 4. Kuldeep Sharma

Q.4 Triangle ABC is similar to triangle DEF with $\frac{\overline{BC}}{\overline{EF}} = \frac{1}{4}$. Find $\frac{\text{Area (triangle DEF)}}{\text{Area (triangle ABC)}}$.

Ans ✔ 1. 16

✗ 2. $\frac{1}{4}$

✗ 3. $\frac{1}{16}$

✗ 4. 4

Q.5 Which of the following physical quantities is equivalent to the total path length covered by a moving body?

Ans ✗ 1. Velocity

✔ 2. Distance

✗ 3. Displacement

✗ 4. Speed

Q.6 The LCM of two numbers is 84. If the numbers are in the ratio 2 : 3, then the sum of the numbers is:

Ans ✗ 1. 40

✗ 2. 60

✔ 3. 70

✗ 4. 25

Q.7 If the refractive index of air, water and crown glass are n_1, n_2 and n_3, respectively, then _____.

Ans ✔ 1. $n_1 < n_2 < n_3$

✗ 2. $n_1 < n_2 = n_3$

✗ 3. $n_1 > n_2 > n_3$

✗ 4. $n_1 = n_2 < n_3$

Q.8 The median of the observations 20, 23, 25, 30, 20, 31, 32, 35, 20, 41, 42, 43, 20, 20 and 20 is:

Ans ✗ 1. 26

✔ 2. 25

✗ 3. 23

✗ 4. 28

Q.9 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

24, 33, 44, 57, 72,?

Ans ✗ 1. 96

✗ 2. 100

✔ 3. 89

✗ 4. 94

Q.10 In 2024, which country is cooperating with India to counter China's military assertiveness and has discussed technology transfer for UNICORN at the 2+2 ministerial dialogue?

Ans ✗ 1. Australia

✗ 2. The United States of America

✗ 3. France

✔ 4. Japan

Q.11 48 men can do a work in 5 days while 40 women can do the same work in 9 days. In how many days can 4 men and 6 women together do the same work?

Ans ✗ 1. 48 days

✗ 2. 42 days

✔ 3. 30 days

✗ 4. 24 days

Q.12 In 2023, India imported crude oil from which country, making payments in Indian Rupees (₹), as part of the Rupee-Dirham trade agreement?

Ans ✔ 1. UAE

✗ 2. Oman

✗ 3. Qatar

✗ 4. Russia

Q.13 If a man lifts 1 kg of load to the height of 2.5 m from the ground, then assuming acceleration due to gravity is 10 m/sec^2, magnitude of the work done by the man is _____.

Ans ✔ 1. 25 joules

✗ 2. 2.5 joules

✗ 3. 4 joules

✗ 4. 0.25 joule

Q.14 Q starts from Point A and drives 14 km towards the South. He then takes a left turn, drives 10 km, turns left and drives 9 km. He then takes a left turn and drives 7 km. He takes a final right turn, drives 5 km and stops at Point P. How far (shortest distance) and towards which direction should he drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)

Ans ✗ 1. 3 km towards the South

✗ 2. 3 km towards the East

✗ 3. 3 km towards the North

✔ 4. 3 km towards the West

Q.15 Which of the following molecules acts as an information source for making proteins?

Ans ✗ 1. Ribonucleic acid

✗ 2. Carbohydrates

✗ 3. Phospholipids

✔ 4. Deoxyribonucleic acid

Q.16 The equivalent resistance of the series combination of R ohm and 5 ohm is 7 ohm. Here, R is _____.

Ans ✗ 1. 1 ohm

✗ 2. 7 ohm

✔ 3. 2 ohm

✗ 4. 5 ohm

Q.17 Amita is 2 years elder than her friend Amrita. Amita's father is twice as old as Amita, and Amrita is twice as old as her sister. The ages of Amita's father and Amrita's sister differ by 43 years. The difference between the ages of Amita and Amrita is:

Ans ✔ 1. 2

✗ 2. 4

✗ 3. 1

✗ 4. 3

Q.18 The correct expression of 6.4646464646......... in the fractional form is:

Ans ✗ 1. $\dfrac{646}{99}$

✔ 2. $\dfrac{640}{99}$

✗ 3. $\dfrac{6464}{1000}$

✗ 4. $\dfrac{640}{100}$

Q.19 If 60% of a number is added to 120, then the result is the number itself. 60% of this number is _____.

Ans ✔ 1. 180

✗ 2. 320

✗ 3. 200

✗ 4. 300

Q.20 Which of the following statements about magnetic field is correct?

Ans ✗ 1. It is a scalar quantity.

✗ 2. It only exists outside the magnet.

✔ 3. Its direction at any point is measured by a magnetic compass.

✗ 4. It is always in the form of straight lines.

Q.21 In a certain code language, 'SKATE' is coded as '35186' and 'TAKER' is coded as '51623'. What is the code for 'R' in the given code language?

Ans ✗ 1. 1

✗ 2. 3

✗ 3. 6

✔ 4. 2

Q.22 Membrane bound organelles are NOT present in:

Ans ✔ 1. Only prokaryotic cells

✗ 2. Neither eukaryotic nor prokaryotic cells

✗ 3. Both eukaryotic and prokaryotic cells

✗ 4. Only eukaryotic cells

Q.23 The Artisan Mahakumbh 2024, organised by the Government of India in Mumbai, was held to promote artisans under which of the following schemes?

Ans ✔ 1. USTAAD (Upgrading the Skills and Training in Traditional Arts/Crafts for Development)

✗ 2. Pradhan Mantri Kaushal Vikas Yojana

✗ 3. Scheme of Fund for Regeneration of Traditional Industries (SFURTI)

✗ 4. Prime Minister's Employment Generation Programme

Q.24 A dishonest shopkeeper pretends to sell his goods at cost price. However, he uses a false weight on which 200 gm is written, but which actually weighs lesser. Using this false weight, the shopkeeper makes a gain of 25%. The actual measure of the weight used is:

Ans ✗ 1. 150 gm

✔ 2. 160 gm

✗ 3. 180 gm

✗ 4. 200 gm

Q.25 A sum of money lent on simple interest becomes $\frac{7}{5}$ of itself in 4 years. Find the rate of interest per annum.

Ans ✗ 1. 6%

✔ 2. 10%

✗ 3. 12%

✗ 4. 15%

Q.26 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

FEB, KJG, POL, UTQ, ?

Ans ✗ 1. YZU

✗ 2. ZXS

✔ 3. ZYV

✗ 4. ZVU

Q.27 RV11 is related to GK18 in a certain way. In the same way, DH29 is related to SW36. To which of the following options is PT22 related, following the same logic?

Ans ✔ 1. EI29

✗ 2. EJ29

✗ 3. FJ29

✗ 4. FI29

Q.28 Which of the following compounds is obtained when gypsum is heated at 373 K?

Ans ✗ 1. $CaSO_4.5H_2O$

✗ 2. $CaSO_4.2H_2O$

✔ 3. $CaSO_4.(1/2\ H_2O)$

✗ 4. CaO

Q.29 All 36 students in a class are standing in a row facing north. Preeti is 12th from the right end while Alisha is 22nd from the left end. How many people stand between Preeti and Alisha?

Ans ✗ 1. 1

✗ 2. 3

✔ 3. 2

✗ 4. 5

Q.30 In a certain code language,

A + B means 'A is the mother of B',

A − B means 'A is the brother of B',

A × B means 'A is the wife of B',

A ÷ B means 'A is the father of B',

and A # B means 'A is the daughter of B'.

How is Q related to J if 'Q + R − P × S ÷ T − J + K'?

Ans   ✔ 1. Mother's mother

✖ 2. Son's daughter

✖ 3. Father's mother

✖ 4. Daughter's son

Q.31 Two people drive towards each other from two places which are 56 km apart. The speed of the first person is 12 km/h and the speed of the other is 14 km/h. After how long will they be 4 km apart if they start driving at the same time?

Ans   ✖ 1. 1 hour

✖ 2. 2 hours 10 minutes

✖ 3. 1 hour 30 minutes

✔ 4. 2 hours

Q.32 Given that one cubic cm of marble weighs 25 gms, the weight of a cuboidal marble block 28 cm in width and 5 cm thick is 112 kg. The length of the block is:

Ans   ✔ 1. 32 cm

✖ 2. 37.5 cm

✖ 3. 36 cm

✖ 4. 26.5 cm

Q.33 Which of the following receptors help in the detection of taste?

Ans   ✖ 1. Photoreceptors

✔ 2. Gustatory receptors

✖ 3. Phonoreceptors

✖ 4. Olfactory receptors

Q.34 Which two numbers should be interchanged to make the given equation correct?

$63 - 45 + 14 + (81 \div 9) \times 4 + 18 \times 3 = 114$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)

Ans ✔ 1. 14 and 18

✗ 2. 4 and 3

✗ 3. 45 and 81

✗ 4. 63 and 81

Q.35 A person saves 30% of his monthly income. If his monthly income increases by 20%, then he saves 20% more than the previous savings. The percentage increase in his expenditure is _____.
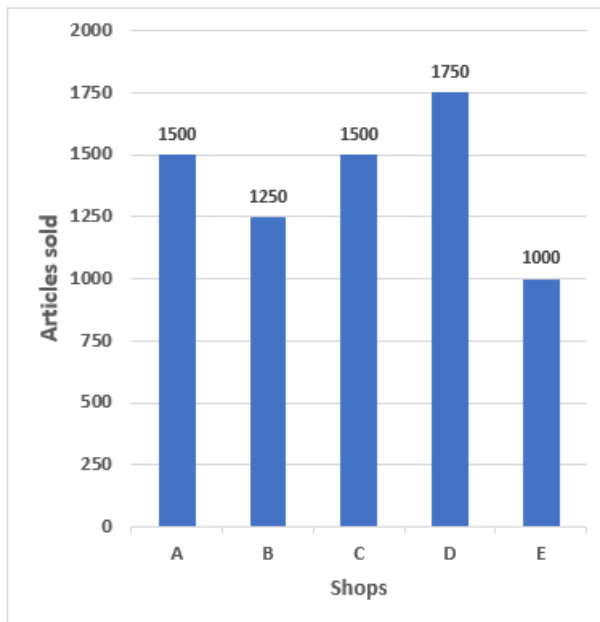
Ans ✗ 1. 16%

✔ 2. 20%

✗ 3. 30%

✗ 4. 25%

Q.36 Study the following graph and answer the given question.

The graph shows the number of articles sold in a week by different shops.

What percentage of articles did shop C sell more than shop B?

Ans ✔ 1. 20%

✗ 2. 30%

✗ 3. 50%

✗ 4. 40%

Q.37 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BDF, IKM, PRT, WYA,?

Ans
  ✗ 1. CFI

  ✔ 2. DFH

  ✗ 3. CEG

  ✗ 4. DGJ

Q.38 In a certain code language, 'DOTH' is coded as '3764' and 'HOLD' is coded as '7943'. What is the code for 'T' in the given code language?

Ans
  ✗ 1. 4

  ✗ 2. 7

  ✔ 3. 6

  ✗ 4. 3

Q.39 Which of the following metals is more reactive towards dilute hydrochloric acid?

Ans
  ✔ 1. Mg

  ✗ 2. Zn

  ✗ 3. Fe

  ✗ 4. Al

Q.40 Simplify the following expression:

$$\frac{4.32 \times 4.32 - 2.64 \times 2.64}{1.68}$$

Ans
  ✗ 1. 6.56

  ✗ 2. 6.99

  ✗ 3. 6.94

  ✔ 4. 6.96

Q.41 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 192 :: 34 : Y

Ans ✔ 1. X = 59, Y = 117

✘ 2. X = 52, Y = 102

✘ 3. X = 45, Y = 136

✘ 4. X = 48, Y = 128

Q.42 The final match for Irani Trophy 2024-25, which was won by Mumbai, was conducted at _____.

Ans ✘ 1. Ahmedabad

✔ 2. Lucknow

✘ 3. Patna

✘ 4. Hyderabad

Q.43 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)
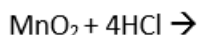
Ans ✘ 1. OM-KP

✔ 2. MK-IO

✘ 3. RP-NS

✘ 4. IG-EJ

Q.44 Which of the following options represents the product(s) of the reaction given below?

$MnO_2 + 4HCl \rightarrow$

Ans ✔ 1. $MnCl_2$, Cl_2 and $2H_2O$

✘ 2. Only H_2O

✘ 3. Only Cl_2

✘ 4. Only $MnCl_2$

Q.45 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Severe congestion is seen on the service road outside the apartment complex between 7.30 a.m. to 9 a.m. everyday due to many school buses from different schools picking up children from gate of the apartment complex. This is leading to a traffic jam, delaying many people travelling for work at this time.

Courses of Action:

(I) No school buses should be permitted on the service road from 7.30 a.m. to 9 a.m.

(II) School buses should be permitted to enter the society gates.

Ans ✗ 1. Only II follows

✔ 2. Neither I nor II follows

✗ 3. Both I and II follow

✗ 4. Only I follows

Q.46 A, B, C, D, E and F are sitting around a circular table facing the centre. F sits second to the right of C. D is an immediate neighbour of E and F. A sits second to the left of B. What is the position of E with respect to C?

Ans ✗ 1. Third to the left

✗ 2. Immediate right

✗ 3. Second to the right

✔ 4. Second to the left

Q.47 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some bulbs are sands.

All bulbs are candles.

Conclusion:

(I) Some candles are bulbs.

(II) No candle is a sand.

Ans ✔ 1. Only conclusion (I) follows.

✗ 2. Only conclusion (II) follows.

✗ 3. Neither conclusion (I) nor (II) follows.

✗ 4. Both conclusions (I) and (II) follow.

Q.48 The surface area of a sphere is 256π m^2. Find its diameter.

Ans ✗ 1. 12 m

✗ 2. 8 m

✔ 3. 16 m

✗ 4. 4 m

Q.49 If each vowel in the word WEIGHT is changed to the letter immediately succeeding it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. Which of the following letters is repeated twice in the new group of letters thus formed?

Ans ✗ 1. J

✔ 2. F

✗ 3. V

✗ 4. G

Q.50 On which date did the Department of Posts launch the philately scholarship scheme in 2024?

Ans ✗ 1. 20 July 2024

✗ 2. 5 September 2024

✗ 3. 15 August 2024

✔ 4. 24 August 2024

Q.51 What is required for the synthesis of thyroxin hormones?

Ans ✗ 1. Chlorine

✗ 2. Nickel

✔ 3. Iodine

✗ 4. Bromine

Q.52 If the mean of a data is 65 and its mode is 23, then the median using empirical formula is:

Ans ✗ 1. 54

✗ 2. 53

✗ 3. 52

✔ 4. 51

Q.53 Which of the following is the highest award in the Rashtriya Vigyan Puraskar awards?

Ans ✗ 1. Vigyan Mahan

✗ 2. Vigyan Shri

✔ 3. Vigyan Ratna

✗ 4. Vigyan Vajra

Q.54 Which Indian city recorded the highest PM2.5 level in 2023, making it the most polluted metropolitan area globally?

Ans ✔ 1. Begusarai

✗ 2. Greater Noida

✗ 3. Mullanpur

✗ 4. Guwahati

Q.55 Who among the following was appointed as the Brand Ambassador of the Ministry of Ports, Shipping and Waterways of the Government of India?

Ans ✗ 1. P R Shreejesh

✔ 2. Manu Bhaker

✗ 3. Neeraj Chopra

✗ 4. Sarabjot Singh

Q.56 If $x : y = 8 : 3$, then $(x + y) : (x - y) = $?

Ans ✗ 1. $2 : 5$

✗ 2. $5 : 11$

✔ 3. $11 : 5$

✗ 4. $5 : 2$

Q.57 Which of the following animals shows the power of regeneration?

Ans ✔ 1. Planaria

✗ 2. Earthworm

✗ 3. Tick

✗ 4. Leech

Q.58 There are two classrooms, A and B. If 7 students are shifted from A to B, then B will have twice the number of students as A. If 3 students are sent from B to A, then both the classrooms will have the same number of students. The positive difference between the number of students in the two classrooms is:

Ans
✗ 1. 5

✗ 2. 8

✔ 3. 6

✗ 4. 7

Q.59 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

GB-HC-JL

PK-QL-SU

Ans
✗ 1. SN-TO-VW

✗ 2. RM-SN-UV

✔ 3. QL-RM-TV

✗ 4. NI-OJ-QR

Q.60 Seven people, B, C, D, E, F, G and K are sitting in a straight line, facing north. Only five people sit between B and K. G sits to the immediate left of K. Only one person sits between G and E. D sits at some place to the left of F but at some place to the right of C.

Who sits third from the left end of the line?

Ans
✗ 1. F

✗ 2. E

✔ 3. D

✗ 4. C

Q.61 Which of the following statements is/are correct?

Statements:

I) Gravitational force between two objects is independent of the distance of separation between two objects.

II) Gravitational force between two objects is inversely proportional to the square of the distance of separation between two objects.

III) Gravitational force between two objects is directly proportional to the product of their masses.

Ans
✔ 1. Statements II and III

✗ 2. Statements I and III

✗ 3. Statements I, II and III

✗ 4. Statements I and II

Q.62 Which of the following statements is INCORRECT?

Ans ✗ 1. Compressed natural gas (CNG) is used as a fuel in vehicles these days.

✔ 2. The oxygen supplied to hospitals in cylinders is not a compressed gas.

✗ 3. In the gaseous state, the particles move about randomly at a high speed.

✗ 4. The oxygen supplied to hospitals in cylinders is a compressed gas.

Q.63 Which of the following is the molecular mass of HNO_3?

Ans ✗ 1. 60 u

✗ 2. 67 u

✔ 3. 63 u

✗ 4. 64 u

Q.64 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

X : 66 :: 9 : Y

Ans ✗ 1. X = 9, Y = 81

✔ 2. X = 8, Y = 83

✗ 3. X = 8, Y = 81

✗ 4. X = 7, Y = 80

Q.65 If each consonant in the word PASTRY is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order, then how many vowels are present in the new group of letters thus formed?

Ans ✗ 1. Two

✔ 2. One

✗ 3. None

✗ 4. Three

Q.66 A retailer would have made a profit of 18% if he had sold an article at its marked price. If the marked price of the article is ₹826, then the cost price of the article is:

Ans ✗ 1. ₹650

✗ 2. ₹800

✗ 3. ₹750

✔ 4. ₹700

Q.67 Why do covalently bonded compounds have low boiling point?

Ans ✗ 1. Have strong intermolecular force within molecules but weak covalent bond

✗ 2. Have strong covalent bond within molecules and also strong intermolecular force

✗ 3. Have weak covalent bond within molecules but weak intermolecular force

✔ 4. Have strong covalent bond within molecules but weak intermolecular force

Q.68 If each vowel in the word ROMANCE is changed to the nearest consonant succeeding it in the English alphabetical order and each consonant is changed to the nearest vowel succeeding it in English alphabetical order, then which of the following letters is repeated twice in the new group of letters thus formed?

Ans ✔ 1. O

✗ 2. P

✗ 3. U

✗ 4. F

Q.69 Which of the following is an example of heterogeneous solution?

Ans ✔ 1. Mixture of oil and water

✗ 2. Tincture of iodine

✗ 3. Mixture of ethanol and water

✗ 4. Lemonade

Q.70 If 'P' stands for '×', 'Q' stands for '÷', 'R' stands for '−' and 'S' stands for '+', what will come in place of the question mark '?' in the following equation?

(32 P 4) R (21 P 5) S (9 Q 3) P 6 = ?

Ans ✔ 1. 41

✗ 2. 50

✗ 3. 33

✗ 4. 47

Q.71 The value of $(36)^{1/6}$ is:

Ans ✗ 1. 2

✗ 2. 1

✔ 3. $(6)^{1/3}$

✗ 4. $\sqrt{36}$

Q.72 $\dfrac{\cos 45^0}{\tan 30^0 + \cot 60^0}$ is equal to:

Ans ✔ 1. $\dfrac{\sqrt{3}}{2\sqrt{2}}$

✗ 2. $\dfrac{\sqrt{3}}{\sqrt{2}(1-\sqrt{3})}$

✗ 3. $\dfrac{\sqrt{3}}{\sqrt{2}}$

✗ 4. $\dfrac{\sqrt{3}}{\sqrt{2}(1+\sqrt{3})}$

Q.73 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✔ 1. XF-SC

✗ 2. AK-VF

✗ 3. RB-MW

✗ 4. SC-NX

Q.74 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

No bike is a car.

All cars are planes.

Conclusions

(I) No plane is a bike.

(II) All planes are cars.

Ans ✗ 1. Only conclusion (I) follows

✗ 2. Only conclusion (II) follows

✗ 3. Both conclusions (I) and (II) follow

✔ 4. Neither conclusion (I) nor (II) follows

Q.75 The distance between the centre of curvature and pole of a convex mirror of 1 m focal length is _____.

Ans ✔ 1. 2 m

✗ 2. 0.5 m

✗ 3. 1 m

✗ 4. 1.5 m

2024/12/02-20:44:53

Test Date	27/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 The equivalent resistance of the combination of resistors, when 1 ohm and 2 ohm are connected in parallel, is _____.

Ans ✗ 1. 2 ohm

✗ 2. (3/2) ohm

✔ 3. (2/3) ohm

✗ 4. 3 ohm

Q.2 Carbon has the unique ability to form bonds with other atoms of carbon. This property is known as _____.

Ans ✗ 1. homologous

✗ 2. cyclisation

✗ 3. allotropes

✔ 4. catenation

Q.3 Which of the following hormones stimulates the growth of all organs?

Ans ✗ 1. Insulin

✗ 2. Glucagon

✗ 3. Adrenaline

✔ 4. Growth hormone

Q.4 If each vowel in the word RELATION is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, and then arranged in reverse order of English alphabetical order, then which of the following letters will be fourth from the right in the group of letters thus formed?

Ans ✗ 1. Q

✗ 2. M

✔ 3. K

✗ 4. P

Q.5 If a light ray is travelling from medium of refractive index 'n$_1$' to the medium of refractive index 'n$_2$' such that angle of incidence is 'i' and angle of refraction 'r' (assuming $0< i <90$ degree), then n$_1$/n$_2$ is equal to _____.

Ans
✔ 1. $\dfrac{sinr}{sini}$

✘ 2. sinr – sini

✘ 3. sini – sinr

✘ 4. $\dfrac{sini}{sinr}$

Q.6 Which of the following elements is extracted by using electrolytic reduction?

Ans
✔ 1. Na

✘ 2. Fe

✘ 3. Zn

✘ 4. Pb

Q.7 Select the option that shows all biodegradable substances.

Ans
✘ 1. Glass bottle, Milk packets, Egg shells, Banana peel

✘ 2. Medicine bottle, Old shoe, Stale biscuits

✘ 3. Bubble packs, Vegetable peelings, Stale bread

✔ 4. Eggshells, Tea leaves, Potato peelings

Q.8 If each vowel in the word GROUPS is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order and then arrange the so formed group of letters in English alphabetical order, then which of the following letters will be third from the left in the group of letter thus formed?

Ans
✔ 1. Q

✘ 2. T

✘ 3. P

✘ 4. S

Q.9 In the case of reflection of light from a concave mirror, when a parallel beam of light is incident on the reflecting surface, reflected light _____.

Ans
✘ 1. appears to diverge from the centre of curvature

✔ 2. appears to converge at the principal focus

✘ 3. appears to converge at the centre of curvature

✘ 4. appears to diverge from the principal focus

Q.10 In a certain code language, 'know me better' is coded as 'jf bu pd' and 'better know something' is coded as 'bu jf ls'. What is the code for 'something' in the given code language?

Ans ✗ 1. jf

✗ 2. bu

✗ 3. pd

✓ 4. ls

Q.11 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. GJO

✗ 2. LOT

✗ 3. SVA

✓ 4. CGK

Q.12 What percentage of solar energy is captured by green plants in terrestrial ecosystem?

Ans ✓ 1. 1 percent

✗ 2. 100 percent

✗ 3. 10 percent

✗ 4. 5 percent

Q.13 What is the name of Bhim Singh's book launched on August 11, 2024?

Ans ✗ 1. Unsung Warriors of India

✗ 2. Legends of Indian Revolution

✗ 3. Heroes of Indian Freedom

✓ 4. 75 Great Revolutionaries of India

Q.14 Which of the following is the longest cell in our body?

Ans ✗ 1. Fat cell

✗ 2. Blood cell

✗ 3. Ovum

✓ 4. Nerve cell

Q.15 The Indian Air Force (IAF) contingent returned to India on 10 August 2024 after participating in Exercise _____ in Malaysia.

Ans ✗ 1. Red Flag

✗ 2. Garuda

✗ 3. Cope India

✔ 4. Udara Shakti

Q.16 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All chairs are tables.

Some tables are beds.

Conclusions:

(I) All beds are chairs.

(II) Some tables are chairs.

Ans ✗ 1. Both conclusions (I) and (II) follow

✔ 2. Only conclusion (II) follows

✗ 3. Only conclusion (I) follows

✗ 4. Neither conclusion (I) nor (II) follows

Q.17 If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:

Ans ✗ 1. 7 days

✗ 2. 6 days

✔ 3. 4 days

✗ 4. 5 days

Q.18 Cells of the meristematic tissue are very active, but they lack:

Ans ✗ 1. thin cellulose walls

✗ 2. prominent nuclei

✗ 3. dense cytoplasm

✔ 4. vacuoles

Q.19 A man sells an article at a profit of 25%. If he had bought it at 20% less and sold it for ₹10.50 less, he would have gained 30%. Find the cost price of the article.

Ans ✗ 1. ₹125

  ✔ 2. ₹50

  ✗ 3. ₹100

  ✗ 4. ₹25

Q.20 L, P, R, V, X, Y, and Z, are sitting around a circular table facing the centre. R sits to the immediate right of V. Only three people sit between R and Z when counted from the left of R. Only three people sit between V and P. X sits to the immediate right of Y. How many people sit between L and Y, when counted from the left of Y?

Ans ✗ 1. One

  ✗ 2. Four

  ✗ 3. Three

  ✔ 4. Two

Q.21 The internal bisectors of ∠Q and ∠R of ΔPQR meet at S. If m∠P =75°, then m∠QSR is:

Ans ✔ 1. 127.5°

  ✗ 2. 105.5°

  ✗ 3. 112.5°

  ✗ 4. 102.5°

Q.22 A fraction becomes $\frac{1}{2}$ if 2 is added to the numerator and 5 is added to the denominator. It also becomes $\frac{1}{3}$ if 2 is subtracted from both the numerator and denominator. The positive difference between the denominator and the numerator of the fraction is:

Ans ✔ 1. 2

  ✗ 2. 3

  ✗ 3. 4

  ✗ 4. 1

Q.23 After a decrease of 24%, the price of an article is ₹988. The actual cost of the article is:

Ans ✗ 1. ₹1,100

  ✔ 2. ₹1,300

  ✗ 3. ₹1,400

  ✗ 4. ₹1,200

Q.24 Which award has been conferred to Ms. Prema Dhanraj in the field of Medicine in 2024?

Ans ✗ 1. Padma Bhusan

✔ 2. Padma Shri

✗ 3. Bharat Ratna

✗ 4. Padma Vibhusan

Q.25 Which two numbers should be interchanged to make the given equation correct?

$(27 + 15) \times 2 - (95 \div 5) + 25 \times 4 - 135 = 62$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

Ans ✗ 1. 5 and 15

✔ 2. 95 and 135

✗ 3. 2 and 4

✗ 4. 25 and 27

Q.26 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. JH-FI

✗ 2. QO-MP

✗ 3. TR-PS

✔ 4. NL-JL

Q.27 Which of the following compounds is used in soda-acid fire extinguishers?

Ans ✗ 1. Calcium chloride

✗ 2. Bleaching powder

✔ 3. Sodium bicarbonate

✗ 4. Sodium carbonate

Q.28 In which of the following phenomena does a solid substance change into a liquid substance?

Ans ✗ 1. Deposition

✗ 2. Solidification

✔ 3. Fusion

✗ 4. Sublimation

Q.29 Average velocity of a body can be given by the arithmetic mean of initial velocity and final velocity for a given period of time when the body is:

Ans
✗ 1. moving with uniform speed

✗ 2. moving with uniform velocity

✗ 3. moving with non-uniform acceleration

✓ 4. moving with uniform acceleration

Q.30 A solution contains 25 g of copper chloride salt in 250 g of water. Calculate the concentration in terms of mass by mass percentage of the solution.

Ans
✓ 1. 9.09%

✗ 2. 18.01%

✗ 3. 36.01%

✗ 4. 27.01%

Q.31 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

LG-MH-OP

HC-ID-KL

Ans
✓ 1. JE-KF-MN

✗ 2. KF-LG-NP

✗ 3. ID-JE-LN

✗ 4. OJ-PK-RT

Q.32 As of 2024, how many members are there in the steering committee of the GlobE Network, in which India has been elected as a member, as announced by the Central Bureau of Investigation (CBI)?

Ans
✗ 1. 12

✓ 2. 15

✗ 3. 20

✗ 4. 10

Q.33 Study the following graph and answer the given question.

The bar graph shows the number of different items sold by a shopkeeper in their respective quantities.
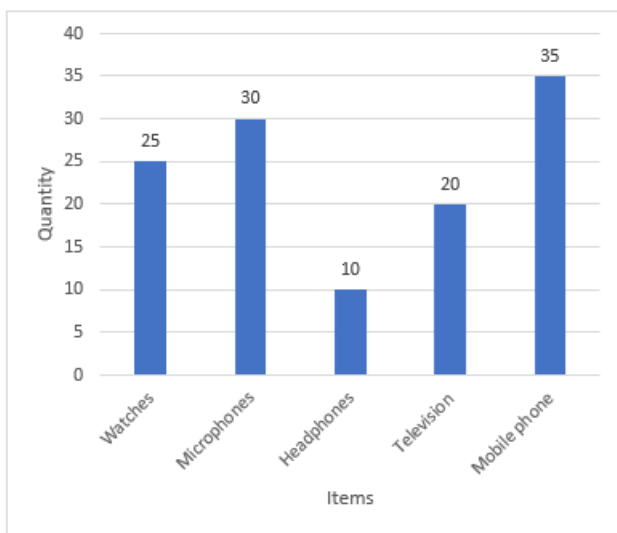
What is the total units of Headphones and Mobile phones sold put together?

Ans ✗ 1. 25

✗ 2. 15

✔ 3. 45

✗ 4. 35

Q.34 KGFL is related to OJHM in a certain way based on the English alphabetical order. In the same way, ASNP is related to EVPQ. To which of the following options is MBTS related, following the same logic?

Ans ✗ 1. QEVW

✗ 2. QEXS

✗ 3. QFVT

✔ 4. QEVT

Q.35 If each consonant in the word VERIFY is changed to the letter immediately succeeding it in the English alphabetical order and each vowel is changed to the letter immediately preceding it in the English alphabetical order, then how many consonants are present in the new group of letters thus formed?

Ans ✗ 1. Four

✗ 2. Five

✔ 3. Six

✗ 4. Three

Q.36 The arithmetic mean of the observations 3, 6, 8, 10, 12, 14, 18, 24 and 31 is:

Ans ✗ 1. 17

✗ 2. 16

✗ 3. 15

✔ 4. 14

Q.37 The formula unit mass of $CaCl_2$ is:

Ans ✔ 1. 111 u

✗ 2. 110 u

✗ 3. 114 u

✗ 4. 115 u

Q.38 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

YZX, VWU, STR, PQO, MNL, ?

Ans ✗ 1. KJI

✗ 2. CBA

✔ 3. JKI

✗ 4. IJK

Q.39 Which of the following fractions is greater than $\frac{2}{3}$ and less than $\frac{4}{5}$?

Ans ✔ 1. $\frac{3}{4}$

✗ 2. $\frac{1}{2}$

✗ 3. $\frac{9}{11}$

✗ 4. $\frac{5}{6}$

Q.40 Which of the following is the SI unit of work done?

Ans ✗ 1. Metre

✔ 2. Joule

✗ 3. Erg

✗ 4. Newton

Q.41 Which instrument can be used to give the direction of magnetic field lines at any given point?

Ans
   ✗ 1. Generator

   ✗ 2. Solenoid

   ✗ 3. Electric motor

   ✓ 4. Magnetic compass

Q.42 At what rate (in percentage) per annum will ₹1,300 give ₹520 as simple interest in 5 years?

Ans
   ✗ 1. 4%

   ✗ 2. 5%

   ✗ 3. 7%

   ✓ 4. 8%

Q.43 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(6, 37)

(8, 65)

Ans
   ✗ 1. (7, 49)

   ✓ 2. (9, 82)

   ✗ 3. (5, 24)

   ✗ 4. (3, 27)

Q.44 Who among the following won the Gold medal at Paralympics in the Women's 10m air rifle standing SH1 Shooting category?

Ans
   ✗ 1. Manisha Agarwal

   ✗ 2. Amulya Choudhary

   ✗ 3. Preeti Pal

   ✓ 4. Avani Lekhara

Q.45 If the surface area of a sphere is $2124\frac{4}{7}$ cm^2, then what is the diameter of that sphere? [Use $\pi = \frac{22}{7}$]

Ans
   ✗ 1. 28 cm

   ✗ 2. 14 cm

   ✓ 3. 26 cm

   ✗ 4. 13 cm

Q.46 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. E sits third from the left end. Only one person sits to the right of D. G sits second to the left of D. B sits to the immediate right of C. F does not sit to the right of A. How many people sit between F and E?

Ans ✗ 1. Two

✗ 2. Three

✗ 3. Four

✔ 4. One

Q.47 If $x + \frac{1}{x} = 4$, then $x^2 + \frac{1}{x^2} = ?$

Ans ✗ 1. 16

✗ 2. 12

✔ 3. 14

✗ 4. 18

Q.48 Which of the following products are formed when sodium sulphate reacts with barium chloride?

Ans ✗ 1. Yellow precipitate of $BaSO_4$ and 2NaCl (aq)

✗ 2. Brown precipitate of $BaSO_4$ and 2NaCl (aq)

✗ 3. Black precipitate of $BaSO_4$ and 2NaCl (aq)

✔ 4. White precipitate of $BaSO_4$ and 2NaCl (aq)

Q.49 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

The special task force set up by the government has found that toxic waste is being mixed with dry waste by many apartment complexes before collection by the municipality, causing severe danger to the waste processing personnel and the environment.

Courses of Action:

(I) Apartment complexes should be heavily penalised in instances where toxic and dry waste is not properly segregated before collection.

(II) Apartment complexes should issue clear guidelines on waste segregation to the apartment residents.

Ans ✗ 1. Only I follows

✔ 2. Both I and II follow

✗ 3. Neither I nor II follows

✗ 4. Only II follows

Q.50 For certain data, the mode is 24.6 and mean is 20.1. What is the median of that data, using empirical formula?

Ans

✗ 1. 24.1

✔ 2. 21.6

✗ 3. 23.5

✗ 4. 22.2

Q.51 In a certain code language, 'big small average' is coded as '22 33 55', 'small treat party' is coded as '55 44 77', and 'party average people' is coded as '77 22 99 '. What is the code for 'people' in the given code language?

Ans

✔ 1. 99

✗ 2. 55

✗ 3. 22

✗ 4. 77

Q.52 In a row of 37 persons, Aneesha is 12th from the left end. What is her position from the right end?

Ans

✗ 1. 16

✗ 2. 24

✗ 3. 27

✔ 4. 26

Q.53 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

GHM, IJO, KLQ, MNS, OPU, ?

Ans

✗ 1. QSV

✗ 2. QRV

✔ 3. QRW

✗ 4. QSW

Q.54 If $x : y = 7 : 3$, then $(x - y) : (x + y) = ?$

Ans

✗ 1. 1 : 5

✗ 2. 5 : 1

✔ 3. 2 : 5

✗ 4. 5 : 2

Q.55 The cost of 12 pens and 7 pencils is ₹233. If the cost of a pen decreases by ₹1.50 and the cost of a pencil increases by ₹1, then the cost of 2 pens and 3 pencils is ₹48. What is the original cost of 2 pens and 3 pencils?

Ans

✗ 1. ₹41

✗ 2. ₹46

✔ 3. ₹48

✗ 4. ₹54

Q.56 In a certain code language,

A + B means 'A is the mother of B',

A − B means 'A is the brother of B',

A × B means 'A is the wife of B',

A ÷ B means 'A is the father of B',

and A # B means 'A is the daughter of B'.

How is P related to F if 'F − E # L × Q − P # N?

Ans

✗ 1. Mother's sister

✗ 2. Brother's daughter

✔ 3. Father's sister

✗ 4. Brother's son

Q.57 In June 2024, the Indian Army opened the Khalubar War Memorial to tourists, which is located in _____, India.

Ans

✗ 1. Bengaluru

✗ 2. Chandigarh

✗ 3. New Delhi

✔ 4. Ladakh

Q.58 Select the number from among the given options that can replace the question mark (?) in the following series.

45   95   245   695   ?

Ans

✗ 1. 1995

✔ 2. 2045

✗ 3. 2125

✗ 4. 2075

Q.59 Select the set, from the given options, in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(2, 24, 6)

(4, 32, 2)

Ans ✗ 1. (3, 48, 4)

✗ 2. (5, 70, 3)

✔ 3. (6, 108, 3)

✗ 4. (9, 80, 1)

Q.60 How many sports personalities have received Major Dhyan Chand Khel Ratna Awards in National Sports Awards 2023?

Ans ✗ 1. 6

✗ 2. 3

✗ 3. 5

✔ 4. 2

Q.61 If 'I' stands for '+', 'J' stands for '×', 'K' stands for '÷', and 'L' stands for '−', what will come in place of question mark '?' in the following equation?

(24 J 3) K 6 I (14 J 2) L 19 =?

Ans ✗ 1. 15

✗ 2. 34

✗ 3. 19

✔ 4. 21

Q.62 Which of the following statements is correct about the gravitational force between the earth and the moon?

Ans ✗ 1. Gravitational force is repulsive when the moon is far from the earth.

✔ 2. Gravitational force is attractive and maximum when the moon is close to the earth.

✗ 3. Gravitational force is attractive and maximum when the moon is far from the earth.

✗ 4. Gravitational force is repulsive and minimum when the moon is far from the earth.

Q.63 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some kings are servants.

Some servants are fighters.

Conclusions:

(I) Some fighters are kings.

(II) All servants are kings.

Ans ✗ 1. Only conclusion (II) follows

✔ 2. Neither conclusion (I) nor (II) follows

✗ 3. Only conclusion (I) follows

✗ 4. Both conclusions (I) and (II) follow

Q.64 Ramesh and Suresh's mud buildings have heights of 8 cm and 15 cm respectively. They are 24 cm apart. How far are the tops of their mud buildings from each other?

Ans ✗ 1. 30 cm

✗ 2. 31 cm

✔ 3. 25 cm

✗ 4. 24 cm

Q.65 The ability of a fully differentiated organism to give rise to new individuals from their body parts is known as:

Ans ✗ 1. budding

✗ 2. fission

✔ 3. regeneration

✗ 4. Fragmentation

Q.66 The smallest four-digit number that is exactly divisible by each of 24, 40 and 56 is:

Ans ✗ 1. 1170

✔ 2. 1680

✗ 3. 1260

✗ 4. 1080

Q.67 Which union territory became the first to achieve full functional literacy under the ULLAS-Nav Bharat Saaksharta Karyakram?

Ans ✗ 1. Chandigarh

✗ 2. Puducherry

✔ 3. Ladakh

✗ 4. Lakshadweep

Q.68 A dealer allows a 30% discount on the marked price of an item. What is the marked price of the item if its sale price is ₹12,460?

Ans ✔ 1. ₹17,800

✗ 2. ₹17,860

✗ 3. ₹16,800

✗ 4. ₹16,760

Q.69 The square of 42 is:

Ans ✔ 1. 1764

✗ 2. 1504

✗ 3. 1564

✗ 4. 1664

Q.70 The expenditure of Swarna is 125% more than her savings. If her expenditure decreases by 6% and savings increases by 26.5%, then by what percentage does her income increase?

Ans ✔ 1. 4%

✗ 2. 20.5%

✗ 3. 18.5%

✗ 4. 8%

Q.71 A thief running at a speed of 8 km/h is chased by a policeman whose speed is 10 km/h. If the thief is 100 m ahead of the policeman, then the time required for the policeman to catch the thief will be:

Ans ✗ 1. 2 minutes

✗ 2. 6 minutes

✔ 3. 3 minutes

✗ 4. 10 minutes

Q.72 Which institute is responsible for the development of the 'Investor Information and Analytics Platform' in 2024?

Ans ✗ 1. IIT Delhi

✗ 2. IIT Bombay

✔ 3. IIT Madras

✗ 4. IIT Kanpur

Q.73 Vineet starts from Point Y and drives 10 km towards the North. He then takes a right turn, drives 29 km, turns right and drives 34 km. He then takes a right turn and drives 13 km. He takes a final right turn, drives 24 km and stops at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)

Ans ✗ 1. 24 km towards the south

✗ 2. 14 km towards the north

✔ 3. 16 km towards the west

✗ 4. 19 km towards the east

Q.74 The area of the base of a rectangular tank is 6500 cm^2 and the volume of water contained in it is 2.6 cubic meters. The depth of water in the tank is:

Ans ✗ 1. 6 m

✗ 2. 5 m

✔ 3. 4 m

✗ 4. 3.5 m

Q.75 Which off the following is the roadmap to achieve development and child protection priorities aligned with the Sustainable Development Goals (SDGs)?

Ans ✗ 1. Mission Arpan

✔ 2. Mission Vatsalya

✗ 3. Mission Surksha

✗ 4. Mission Vardan

2024/12/02-21:08:10

Test Date	28/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

* Note

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

GJN, ILP, KNR, MPT, ?

Ans ✔ 1. ORV

✘ 2. OVR

✘ 3. RVO

✘ 4. ROV

Q.2 Name the scientist who first discovered the cell in 1665.

Ans ✘ 1. Antonie van Leeuwenhoek

✔ 2. Robert Hooke

✘ 3. Matthias Jakob Schleiden

✘ 4. Theodor Schwann

Q.3 If a regular polygon has 65 diagonals, then the number of sides this polygon has is:

Ans ✘ 1. 12

✔ 2. 13

✘ 3. 14

✘ 4. 10

Q.4 Which of the following actions is responsible for the survival of species over time?

Ans ✘ 1. Reproduction

✘ 2. Conservation

✔ 3. Variation

✘ 4. Struggle

Q.5 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. Only five people sit between A and F. G sits third to the left of F. E is the immediate neighbour of B and F. C is not the immediate neighbour of G.

How many people sit between C and E?

Ans ✗ 1. Four

✔ 2. Three

✗ 3. Two

✗ 4. One

Q.6 Town A is the north of Town B. Town C is to the east of Town B. Town D is to the west of Town C. Town A is to the north-east of Town D. Town M is to the north of Town C. What is the position of Town D with respect to Town M?

Ans ✔ 1. South-west

✗ 2. North-east

✗ 3. West

✗ 4. East

Q.7 The value of $\sqrt{0.0016} \times \sqrt[3]{8000000}$ is:

Ans ✔ 1. 8

✗ 2. 0.8

✗ 3. 16

✗ 4. 1.6

Q.8 Six people, A, B, C, D, E and F are sitting in a straight line, facing north.

Only three people sit to the left of E. B sits second to the right of E. Only three people sit between A and C. C sits immediately left of D.

How many people sit between D and F?

Ans ✗ 1. Three

✗ 2. One

✗ 3. Two

✔ 4. None

Q.9 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left)   5 3 % 4 6 & 8 $ 7 * Ω 9 # 1 2 & @ £   (Right)

How many such symbols are there, each of which is immediately preceded by a symbol and also immediately followed by a symbol?

Ans   ✗ 1. Two

✗ 2. More than two

✔ 3. One

✗ 4. Zero

Q.10 The sum of all prime numbers between 60 and 90 is:

Ans   ✔ 1. 523

✗ 2. 460

✗ 3. 610

✗ 4. 373

Q.11 Consider a parallel combination of 2 resistors with resistances $4\,\Omega$ and $6\,\Omega$. The equivalent resistance of the circuit is:

Ans   ✗ 1. $12\,\Omega$

✔ 2. $2.4\,\Omega$

✗ 3. $4.2\,\Omega$

✗ 4. $10\,\Omega$

Q.12 What determines the chemical properties of a carbon compound?

Ans   ✗ 1. Number of Hydrogen atoms

✔ 2. Functional group

✗ 3. Molecular mass

✗ 4. Length of the carbon chain

Q.13 What is the use of high-performance computing systems 'Arka' and 'Arunika'?

Ans   ✗ 1. Monitoring unwanted elements on social media

✗ 2. Cyber crime detection

✔ 3. Weather forecasting

✗ 4. Detecting the location of drugs

Q.14 Find the volume of a sphere whose diameter is 84 m. [Use $\pi = \frac{22}{7}$]

Ans   ✔ 1. 310,464 m³

   ✘ 2. 323,434 m³

   ✘ 3. 338,808 m³

   ✘ 4. 313,418 m³

Q.15 Under the Prime Minister's Internship Scheme launched in October 2024, candidates will receive a monthly stipend of what amount for the full 12-month internship period?

Ans   ✘ 1. ₹6,500

   ✘ 2. ₹2,000

   ✘ 3. ₹1,500

   ✔ 4. ₹5,000

Q.16 In 2024, Air Marshal Tejinder Singh was appointed as the _____ at the Air Headquarters (Vayu Bhawan).

Ans   ✔ 1. Deputy Chief of the Air Staff

   ✘ 2. Chief of Defence Staff

   ✘ 3. Air Officer Commanding-in-Chief

   ✘ 4. Chief of the Air Staff

Q.17 In a certain code language,

'A + B' means 'A is the mother of B',

'A – B' means 'A is the brother of B',

'A x B' means 'A is the wife of B' and

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M ÷ N x P – S + T'?

Ans   ✘ 1. Mother's brother's wife's brother

   ✔ 2. Mother's brother's wife's father

   ✘ 3. Mother's father

   ✘ 4. Mother's brother

Q.18 Aarav can do a piece of work alone in 6 days and Babita can do it alone in 8 days. Aarav and Babita undertook to do it for ₹2,400. With the help of Chaitanya, they completed the work in 3 days. How much is to be paid to Babita?

Ans ✗ 1. ₹1,200

✗ 2. ₹800

✔ 3. ₹900

✗ 4. ₹1,400

Q.19 In a certain code language, 'HAIR' is coded as '9715' and 'AGED' is coded as '8612'. What is the code for 'A' in the given code language?

Ans ✗ 1. 8

✔ 2. 1

✗ 3. 7

✗ 4. 2

Q.20 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

No dogs are pigs.

All pigs are stones.

Conclusions:

(I) Some stones are pigs.

(II) No stones are dogs.

Ans ✗ 1. Only conclusion (II) follows

✔ 2. Only conclusion (I) follows

✗ 3. Both conclusions (I) and (II) follow

✗ 4. Neither conclusion (I) nor (II) follows

Q.21 What type of reaction takes place when a single reactant breaks down into simpler products?

Ans ✗ 1. Double displacement

✔ 2. Decomposition

✗ 3. Displacement

✗ 4. Combination

Q.22 A class of 30 students appeared in a test. The average score of 12 students is 80, and that of the rest is 75. What is the average score of the class?

Ans ✗ 1. 67

✗ 2. 56

✗ 3. 87

✓ 4. 77

Q.23 The Union Cabinet approved the establishment of International Big Cat Alliance (IBCA) with headquarters in India with a one-time budgetary support of ₹150 crore for a period of _____.

Ans ✗ 1. 3 years

✗ 2. 10 years

✗ 3. 7 years

✓ 4. 5 years

Q.24 If ₹2,400 is to be distributed between A and B in the ratio of 7 ∶ 5 , then the share of B is:

Ans ✗ 1. ₹1,600

✗ 2. ₹1,900

✓ 3. ₹1,000

✗ 4. ₹1,300

Q.25 Identify the single cell organism.

Ans ✓ 1. Amoeba

✗ 2. Seaweed

✗ 3. Liver fluke

✗ 4. Leech

Q.26 Where does India rank on the Corruption Perceptions Index as of October 2024?

Ans ✓ 1. 93

✗ 2. 86

✗ 3. 96

✗ 4. 89

Q.27 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

144 C 44 D 12 A 12 B 144=?

Ans ✗ 1. 54

✗ 2. 34

✗ 3. 43

✔ 4. 44

Q.28 The sum of five consecutive numbers is 260. The sum of the first and the last numbers is:

Ans ✗ 1. 116

✔ 2. 104

✗ 3. 126

✗ 4. 96

Q.29 Two successive discounts of 10% and 5% are equivalent to a single discount of _____.

Ans ✗ 1. 15%

✗ 2. 15.5%

✗ 3. 14%

✔ 4. 14.5%

Q.30 Which of the following is NOT a characteristic of particles of matter?

Ans ✔ 1. Particles of matter are static.

✗ 2. Particles of matter have space between them.

✗ 3. Particles of matter attract each other.

✗ 4. Particles of matter are continuously moving.

Q.31 In which Indian state was a 1,300-year-old stupa discovered by the Archaeological Survey of India (ASI) in February 2023?

Ans ✗ 1. West Bengal

✗ 2. Bihar

✔ 3. Odisha

✗ 4. Madhya Pradesh

Q.32 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 198 :: 8 : Y

Ans ✔ 1. X = 6, Y = 488

✖ 2. X = 4, Y = 512

✖ 3. X = 5, Y = 546

✖ 4. X = 7, Y = 538

Q.33 Seven boxes, P, Q, R, S, X, Y and Z, are kept one over the other but not necessarily in the same order. Only P is kept above X. Only two boxes are kept between X and S. Only R is kept below Z. Y is not kept immediately above S. Which box is kept fourth from the top?

Ans ✔ 1. Q

✖ 2. X

✖ 3. R

✖ 4. Z

Q.34 The concept of 'Prodyogiki' in the Yuva Sangam programme (2023) primarily focuses on which of the following?

Ans ✖ 1. Cultural preservation

✖ 2. Political awareness

✖ 3. Economic development

✔ 4. Technology

Q.35 Which of the following numbers is divisible by both 7 and 11?

Ans ✔ 1. 1771

✖ 2. 2684

✖ 3. 3014

✖ 4. 2534

Q.36 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All chairs are tables.

No table is a bed.

Conclusions:

(I) Some beds are chairs.

(II) No bed is a table.

Ans ✗ 1. Both conclusions (I) and (II) follow.

✔ 2. Only conclusion (II) follows.

✗ 3. Neither conclusion (I) nor (II) follows.

✗ 4. Only conclusion (I) follows.

Q.37 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. NG – RK

✗ 2. AT – EX

✗ 3. SL – WP

✔ 4. KD - OF

Q.38 If A means +, B means −, C means ×, D means ÷, then what will come in place of the question mark (?) in the following equation?

14 B 5 C 5 A 30 D 2 = ?

Ans ✗ 1. 1

✗ 2. 3

✔ 3. 4

✗ 4. 2

Q.39 Reena runs at a speed of 8 km/h. How long will she take to cover 200 m?

Ans ✗ 1. 54 seconds

✔ 2. 90 seconds

✗ 3. 175 seconds

✗ 4. 120 seconds

Q.40 If each vowel in the word PLANTED is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the third position from the left in the new group of letters thus formed?

Ans ✗ 1. K

✗ 2. F

✔ 3. B

✗ 4. C

Q.41 A gardener increases the area of his rectangular garden by increasing its length by 40% and decreasing its breadth by 20%. The area of the new garden is what percentage more than the area of the old garden?

Ans ✗ 1. 20%

✔ 2. 12%

✗ 3. 0%

✗ 4. 8%

Q.42 All liquids and gases are:

Ans ✗ 1. solids

✗ 2. semiconductors

✗ 3. insulators

✔ 4. fluids

Q.43 Select the correct sentence(s).

a. The release of energy in the aerobic process is a lot greater than in the anaerobic process.

b. ATP is broken down giving rise to a fixed amount of energy which can drive the endothermic reactions taking place in the cell.

c. The pyruvate is converted into lactic acid which is also a three-carbon molecule.

Ans ✔ 1. a, b and c

✗ 2. Only a and b

✗ 3. Only b and c

✗ 4. Only a

Q.44 Study the following table and answer the given question.

The table shows the expenditure of a family over the given years.

Year	Expenditure in ₹				
	Food	Clothing	Education	Rent	Others
2011	2000	1200	3300	2000	4000
2012	2500	1100	3200	2300	4100

What is the total expenditure (in ₹) on food by the family for the year 2011 and 2012?

Ans ✔ 1. 4,500

✘ 2. 5,000

✘ 3. 6,000

✘ 4. 5,500

Q.45 The magnification produced by a spherical mirror is +0.75. The image is:

Ans ✘ 1. Real, inverted and enlarged

✘ 2. Real, inverted and diminished

✘ 3. Virtual, erect and enlarged

✔ 4. Virtual, erect and diminished

Q.46 When white light falls on a glass prism, it splits into seven colours. The phenomena is known as:

Ans ✘ 1. diffraction

✔ 2. dispersion

✘ 3. refraction

✘ 4. deviation

Q.47 The square of the length of a space diagonal of a closed cube is 2175 cm^2. What is the total surface area (in cm^2) of the cube?

Ans ✘ 1. 4272

✘ 2. 4305

✘ 3. 4530

✔ 4. 4350

Q.48 A dishonest dealer professes to sell his goods at cost price, but uses a false weight and thus gains 25%. For 100 gm, he uses a weight of how many grams?

Ans ✗ 1. 85 gm

✗ 2. 75 gm

✔ 3. 80 gm

✗ 4. 70 gm

Q.49 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. AS – EW

✗ 2. DV – HZ

✔ 3. UM - ZN

✗ 4. YQ – CU

Q.50 In a certain code language, 'MOUSE' is coded as '74651', 'SPOKE' is coded as '52418', and 'PROUD' is coded as '26394'. What is the code for 'K' in the given code language?

Ans ✗ 1. 2

✗ 2. 5

✗ 3. 1

✔ 4. 8

Q.51 A town had a population of 50,000 in 1988. In one year, by 1989, it increased by 25%. Next year, in 1990, it decreased by 30%. The next year, in 1991, there was an increase of 40%. What is the population at the end of 1991?

Ans ✔ 1. 61,250

✗ 2. 60,250

✗ 3. 66,550

✗ 4. 62,250

Q.52 The value of $x^2 - 5$ at $x = -1$ is:

Ans ✗ 1. –2

✔ 2. –4

✗ 3. –1

✗ 4. –5

Q.53 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 140.4 :: 38 : Y

Ans ✗ 1. X = 23, Y = 240.6

✔ 2. X = 26, Y = 205.2

✗ 3. X = 34, Y = 225.8

✗ 4. X = 21, Y = 218.4

Q.54 Who among the following is the author of the book 'Neeraj Chopra: The Man Who Made History'?

Ans ✔ 1. Norris Pritam

✗ 2. Navdeep Singh Gill

✗ 3. Samir Chopra

✗ 4. Shamya Dasgupta

Q.55 The 90th edition of the Ranji Trophy started in October 2024. Which of the following games is the Ranji Trophy related to?

Ans ✗ 1. Hockey

✗ 2. Badminton

✔ 3. Cricket

✗ 4. Baketball

Q.56 From a point on the ground, the angles of elevation of the top and the bottom of a flag that is mounted on an 18 m high pole, are respectively 60° and 30°. The height of the flag is:

Ans ✗ 1. 48 m

✗ 2. 60 m

✔ 3. 36 m

✗ 4. 52 m

Q.57 If each vowel in the word PAINTED is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the third position from the left in the new group of letters thus formed?

Ans

✗ 1. F

✗ 2. B

✗ 3. M

✔ 4. J

Q.58 A group of people consists of men, women, and children. 40% of them are men, 35% are women and rest are children, and their average weights are 70 kg, 60 kg and 30 kg, respectively. The average weight of the group is:

Ans

✔ 1. 56.5 kg

✗ 2. 45.5 kg

✗ 3. 46.5 kg

✗ 4. 55.5 kg

Q.59 If a sum amounts to $2\frac{1}{4}$ times the sum after 2 years on a certain rate of compound interest, compounded annually, then the rate of interest per annum is:

Ans

✗ 1. 25%

✔ 2. 50%

✗ 3. 40%

✗ 4. 30%

Q.60 When the force and the displacement are in the same direction, then work done will be:

Ans

✗ 1. either positive or negative

✗ 2. negative

✔ 3. positive

✗ 4. zero

Q.61 Magnetic field lines around a straight current carrying conductor look like:

Ans

✗ 1. ellipses

✗ 2. hyperbolas

✗ 3. straight lines

✔ 4. concentric circles

Q.62 DGEH is related to ILJM in a certain way based on the English alphabetical order. In the same way, GJHK is related to LOMP. To which of the following options is PSQT related, following the same logic?

Ans ✗ 1. UVXZ

✓ 2. UXVY

✗ 3. VUWY

✗ 4. UXWY

Q.63 Which tissue is responsible for movement in our body?

Ans ✓ 1. Muscular tissue

✗ 2. Nervous tissue

✗ 3. Connective tissue

✗ 4. Epithelial tissue

Q.64 What happens when pea plants showing two different characteristics (the tall/short trait and the round seed/wrinkled seed trait), rather than just one are bred with each other?

Ans ✗ 1. They are all tall and have round seeds in F2 generation.

✗ 2. Some F1 progeny are tall plants with round seeds, and some are short plants with wrinkled seeds.

✗ 3. The tall/short trait and the round seed/wrinkled seed trait are dependently inherited.

✓ 4. The tall/short trait and the round seed/wrinkled seed trait are independently inherited.

Q.65 In September 2024, which High Court of India struck down the amended Information Technology Rules 2023, which empowered the Centre to set up a fact check unit (FCU) to identify fake, false and misleading information about the government and its establishments on social media?

Ans ✗ 1. Delhi High Court

✓ 2. Bombay High Court

✗ 3. Madras High Court

✗ 4. Patna High Court

Q.66 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BFW, DIS, FLO, HOK, ?

Ans ✓ 1. JRG

✗ 2. KQE

✗ 3. KRF

✗ 4. JSG

Q.67 Regarding carbon, which of the following statements is true?

Ans ✗ 1. Carbon is bivalent.

✗ 2. Carbon is trivalent.

✔ 3. Carbon is tetravalent.

✗ 4. Carbon is monovalent.

Q.68 If we add 1 to the numerator and subtract 1 from the denominator of a given fraction, it becomes 1. It becomes $\frac{2}{3}$ if 1 is added to the denominator of the given fraction while the numerator is left unchanged. The positive difference of numerator and denominator of the fraction is:

Ans ✗ 1. 5

✗ 2. 3

✔ 3. 2

✗ 4. 7

Q.69 Select the pair which follows the same pattern as that followed by the two set of pairs given below. Both pairs follow the same pattern.

GTC : KWE

WFK : AIM

Ans ✗ 1. LPA : KMV

✗ 2. JQP : MVW

✔ 3. OZG : SCI

✗ 4. DGB : GLI

Q.70 Which of the following statements is INCORRECT?

Ans ✗ 1. Tooth decay starts when the pH of the mouth is lower than 5.5.

✗ 2. When pH of rain water is less than 5.6, it is called acid rain.

✔ 3. When pH of rain water is more than 5.6, it is called acid rain.

✗ 4. Living organisms can survive only in a narrow range of pH change.

Q.71 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Mr. X, a teacher of a high school, often beats his students.

Courses of Action:

I. Students should complain about this matter to the principal of the school.

II. Students should quit the school and take admission in another school.

Ans ✗ 1. Only II follows.

✗ 2. Both I and II follow.

✗ 3. Neither I nor II follows.

✓ 4. Only I follows.

Q.72 Which of the following options should come in place of the question mark (?) in the given series?

4 5 9 18 34 ?

Ans ✗ 1. 54

✓ 2. 59

✗ 3. 60

✗ 4. 52

Q.73 Which of the following represents the ratio by mass of hydrogen to oxygen atoms (H:O) in a water molecule?

Ans ✓ 1. 1 : 8

✗ 2. 3 : 8

✗ 3. 1 : 4

✗ 4. 1 : 2

Q.74 Milk is a mixture of:

Ans ✗ 1. only water

✓ 2. water, fat, protein etc.

✗ 3. only protein

✗ 4. only fat

Q.75 When a motorcar makes a sharp turn at a high speed, we tend to get thrown to one side. This example is based on which law of motion?

Ans
  ✗ 1. Conservation of momentum

  ✗ 2. Third law of motion

  ✗ 3. Second law of motion

  ✓ 4. First law of motion

2024/12/02-23:31:20

Test Date	28/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

121 C 21 D 11 A 11 B 121=?

Ans ✗ 1. 11

✔ 2. 21

✗ 3. 31

✗ 4. 41

Q.2 What repo rate was declared by the Reserve Bank of India's Monetary Policy Committee (MPC) on 9th October 2024?

Ans ✗ 1. 6.25%

✔ 2. 6.50%

✗ 3. 6.10%

✗ 4. 6.75%

Q.3 If $cos^4\theta - sin^4\theta = k$, then the value of $\frac{1-k}{1+k}$ is:

Ans ✔ 1. $tan^2\theta$

✗ 2. $sin^2\theta$

✗ 3. $cosec^2\theta$

✗ 4. $cot^2\theta$

Q.4 A sum of money, on compound interest, amounts to ₹578.40 in 2 years and to ₹614.55 in 3 years. The rate of interest per annum, in case of annual compounding, is:

Ans ✔ 1. $6\frac{1}{4}$ %

✘ 2. $8\frac{1}{3}$ %

✘ 3. 5%

✘ 4. 4%

Q.5 In a certain code language,

'A + B' means 'A is the mother of B',

'A – B' means 'A is the brother of B',

'A x B' means 'A is the wife of B' and

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M – N + P ÷ S x T'?

Ans ✘ 1. Wife's father's mother's father

✘ 2. Wife's father's brother

✔ 3. Wife's father's mother's brother

✘ 4. Wife's father's father's brother

Q.6 In an election between two candidates, one got 55% of the total valid votes and 20% of the votes were invalid. If the total number of votes was 7500, then the winner won the election by a majority of _____ votes.

Ans ✘ 1. 750

✘ 2. 700

✘ 3. 800

✔ 4. 600

Q.7 In 2024, which program organised youth exchange visits across states, focusing on the '5 Ps', namely Paryatan (Tourism), Parampara (Traditions), Pragati (Development), Paraspar Sampark (People-to-people connect) and Prodyogiki (Technology)?

Ans ✔ 1. Yuva Sangam

✘ 2. Bharat Parv

✘ 3. National Youth Exchange

✘ 4. India Unites

Q.8 Who among the following were the co-flag bearers for India in the closing ceremony of Paris Olympics 2024?

Ans ✗ 1. Manu Bhaker and Neeraj Chopra

✗ 2. Swapnil Kusale and Aman Sehrawat

✔ 3. Manu Bhaker and PR Sreejesh

✗ 4. Neeraj Chopra and PR Sreejesh

Q.9 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 1 $ 7 & 3 4 6 @ 8 Ω % 9 # * £ 2 & 5 (Right)

How many such numbers are there, each of which is immediately preceded by a symbol and also immediately followed by a symbol?

Ans ✗ 1. One

✔ 2. Four

✗ 3. Two

✗ 4. Zero

Q.10 Which of the following is a cup-shaped part of nephron with which each capillary cluster in the kidney is associated?

Ans ✔ 1. Bowman's capsule

✗ 2. Glomerulus

✗ 3. Distal convoluted tubule

✗ 4. Proximal convoluted tubule

Q.11 Which of following compounds is used as an ingredient in antacids?

Ans ✗ 1. Sodium chloride

✗ 2. Nitric acid

✔ 3. Sodium hydrogen carbonate

✗ 4. Copper sulphate

Q.12 The distance between the pole and focus of a spherical mirror, in terms of its radius of curvature R, is equal to:

Ans ✗ 1. R

✗ 2. R/4

✔ 3. R/2

✗ 4. 2R

Q.13 A man sells 320 mangoes at the cost price of 400 mangoes (Cost price of all the articles is same. Selling price of all the articles is same). His gain percentage is:

Ans ✗ 1. 20%

✔ 2. 25%

✗ 3. 10%

✗ 4. 15%

Q.14 In an election, only two candidates contested. One candidate secured 70% of the valid votes and won by a majority of 172 votes. The total number of valid votes was:

Ans ✗ 1. 480

✗ 2. 560

✔ 3. 430

✗ 4. 570

Q.15 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

ORN, PSO, QTP, RUQ, ?

Ans ✗ 1. VSR

✗ 2. USR

✗ 3. SUR

✔ 4. SVR

Q.16 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. KM-PJ

✗ 2. OQ-TN

✔ 3. GI-LE

✗ 4. IK-NH

Q.17 The kinetic energy possessed by a body of mass 2 kg is 100 J. The velocity of the body will be:

Ans ✗ 1. 20 m/s

✔ 2. 10 m/s

✗ 3. 50 m/s

✗ 4. 0 m/s

Q.18 Venu starts from Point Y and drives 7 km towards south. He then takes a left turn, drives 15 km, turns right and drives 38 km. He then takes a left turn and drives 13 km. He takes a left turn, drives 31 km. He then turns left, drives 28km, turns left and drives 13 km to stop at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)

Ans
✗ 1. 24 km towards south

✔ 2. 27 km towards north

✗ 3. 20 km towards south

✗ 4. 28 km towards east

Q.19 DIJH is related to KPQO in a certain way based on the English alphabetical order. In the same way, MRSQ is related to TYZX. To which of the following options is BGHF related, following the same logic?

Ans
✗ 1. IMQN

✔ 2. INOM

✗ 3. JMON

✗ 4. JNQM

Q.20 Pradhan Mantri Janjatiya Unnat Gram Abhiyan will improve the socio-economic condition of tribal communities, covering around _____ villages as per Union Budget 2024-25.

Ans
✗ 1. 56,000

✔ 2. 63,000

✗ 3. 53,000

✗ 4. 76,000

Q.21 The problem of myopia in human eye can be corrected by using:

Ans
✗ 1. a plain glass plate

✔ 2. a concave lens of suitable power

✗ 3. a biconvex lens of suitable power

✗ 4. a convex lens of suitable power

Q.22 Subtract the sum of $2x - 3y + 7z$ and $4z - 5x$ from $13x - z$.

Ans
✗ 1. $3x + 3y - 3z$

✗ 2. $x + 12y - 12z$

✗ 3. $4x + 7y$

✔ 4. $16x + 3y - 12z$

Q.23 Select the process responsible for stability of populations of species.

Ans ✗ 1. Variation

✗ 2. Evolution

✗ 3. Mutation

✔ 4. Reproduction

Q.24 If $a : b = 3 : 4$ and $b : c = 2 : 3,$ then $a : b : c = $?

Ans ✗ 1. $4 : 3 : 6$

✗ 2. $3 : 4 : 3$

✔ 3. $3 : 4 : 6$

✗ 4. $4 : 2 : 3$

Q.25 Which of the following carbon compounds is classified as an alcohol?

Ans ✔ 1. Propanol

✗ 2. Propanone

✗ 3. Propanal

✗ 4. Propanoic

Q.26 What is the least positive number that can be added to 2488 so that it is completely divisible by 3, 4, 5 and 6?

Ans ✗ 1. 34

✗ 2. 42

✗ 3. 28

✔ 4. 32

Q.27 Anju ranked 18th from the bottom and 15th from the top in his class. How many students are there in his class?

Ans ✗ 1. 33

✔ 2. 32

✗ 3. 21

✗ 4. 31

Q.28 Which of the following conditions is required to have the value of displacement of an object zero?

Ans ✔ 1. When the initial and final position of the object is the same.

✗ 2. When distance travelled is greater than the displacement of the object.

✗ 3. When distance travelled is less than the displacement of the object.

✗ 4. When distance travelled is equal to the displacement of the object.

Q.29 In which organism does cell division or fission lead to the creation of new individuals?

Ans ✔ 1. Unicellular organisms

✗ 2. Reptiles

✗ 3. Mammals

✗ 4. Plants

Q.30 The _____ moves water and minerals obtained from the soil while _____ transports products of photosynthesis from the leaves where they are synthesised to other parts of the plant.

Ans ✗ 1. collenchyma, parenchyma

✗ 2. phloem, xylem

✔ 3. xylem, phloem

✗ 4. parenchyma, collenchyma

Q.31 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

RJZ, PMW, NPT, LSQ, ?

Ans ✗ 1. IVM

✔ 2. JVN

✗ 3. JUN

✗ 4. IVN

Q.32 The volume of a cylinder is 5500 m^3. Find its diameter of base if the height of the cylinder is 70 m. [Use $\pi = \frac{22}{7}$]

Ans ✗ 1. 8 m

✗ 2. 12 m

✔ 3. 10 m

✗ 4. 5 m

Q.33 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left)   9 # 1 * £ 2 &   % 4 @ 6 8 $ 7 & 3 Ω 5 (Right)

How many such numbers are there, each of which is immediately preceded by a number and also immediately followed by a symbol?

Ans ✗ 1. Zero

✗ 2. More than two

✔ 3. One

✗ 4. Two

Q.34 The area of the largest triangle that can be inscribed in a semi-circle of radius 6 cm is:

Ans ✔ 1. 36 cm^2

✗ 2. 76 cm^2

✗ 3. 38 cm^2

✗ 4. 72 cm^2

Q.35 Study the following table and answer the question.

The table depicts the number of cars and bikes manufactured by a company in the year 2012 and 2013.

Years	Number of cars (In Thousand)	Number of bikes (In Thousand)
2012	45	50
2013	40	60

How many cars (In Thousand) were manufactured in the year 2012 and 2013 together?

Ans ✗ 1. 95

✗ 2. 105

✗ 3. 75

✔ 4. 85

Q.36 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 58 :: 430 : Y

Ans ✔ 1. X = 295, Y = 85

✗ 2. X = 260, Y = 90

✗ 3. X = 355, Y = 95

✗ 4. X = 310, Y = 70

Q.37 The value of $(0.04)^{-1.5}$ is:

Ans ✗ 1. 625

✔ 2. 125

✗ 3. 25

✗ 4. 250

Q.38 Which of the following is the specialised cell that conducts information via electrical impulses from one part of the body to another?

Ans ✗ 1. Nucleus

✓ 2. Neuron

✗ 3. Axon

✗ 4. Dendrite

Q.39 If the perimeters of two similar triangles ABC and DEF are 75 cm and 40 cm respectively, and if $\overline{BC}$ is 15 cm, then the length of $\overline{EF}$ is:

Ans ✓ 1. 8 cm

✗ 2. 12 cm

✗ 3. 10 cm

✗ 4. 6 cm

Q.40 The sum of five consecutive even numbers is 3720. The sum of the third largest and the largest even numbers among them is:

Ans ✗ 1. 1392

✓ 2. 1492

✗ 3. 1488

✗ 4. 1388

Q.41 In a certain code language, 'PING' is coded as '7953' and 'NOSE' is coded as '4638'. What is the code for 'N' in the given code language?

Ans ✗ 1. 5

✓ 2. 3

✗ 3. 4

✗ 4. 6

Q.42 What happens when acid is mixed with water?

Ans ✓ 1. It will increase the concentration of hydronium ions per unit volume.

✗ 2. There will be no effect on the concentration of ions.

✗ 3. It will decrease the concentration of hydronium ions per unit volume.

✗ 4. It will increase the concentration of hydroxyl ions per unit volume.

Q.43 Which of the following options should come in place of the question mark (?) in the given series?

75 65 56 48 41 ?

Ans ✗ 1. 31

✔ 2. 35

✗ 3. 33

✗ 4. 34

Q.44 The atomic radius of a hydrogen atom is:

Ans ✗ 1. 10^{-7} m

✗ 2. 10^{-8} m

✔ 3. 10^{-10} m

✗ 4. 10^{-9} m

Q.45 On which date did India and the USA sign their first-ever Cultural Property Agreement (CPA)?

Ans ✔ 1. 26 July 2024

✗ 2. 15 May 2024

✗ 3. 20 June 2024

✗ 4. 10 August 2024

Q.46 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. BV – GA

✗ 2. TN – YS

✔ 3. ZT - PG

✗ 4. XR – CW

Q.47 The ages of Anita and Sunita differ by 30 years. If 5 years ago, Anita was 3 times as old as Sunita, then the present age of Sunita is:

Ans ✗ 1. 30 years

✗ 2. 25 years

✗ 3. 35 years

✔ 4. 20 years

Q.48 A can complete a piece of work in 20 days and B can do the same work in 15 days. B worked alone for 6 days and left. In how many days can A complete the remaining work alone?

Ans ✔ 1. 12

✘ 2. 16

✘ 3. $10\frac{1}{2}$

✘ 4. 10

Q.49 Which of the following formulas is used to calculate the volume by volume percentage of a solution?

Ans ✔ 1. $= \dfrac{\text{Volume of solute}}{\text{Volume of solution}} \times 100$

✘ 2. $= \dfrac{\text{Volume of solution}}{\text{Mass of solute}} \times 100$

✘ 3. $= \dfrac{\text{Mass of solute}}{\text{Mass of solution}} \times 100$

✘ 4. $= \dfrac{\text{Mass of solute}}{\text{Volume of solution}} \times 100$

Q.50 What type of reaction occurs when limestone gets converted into quicklime on heating?

Ans ✘ 1. Combination

✘ 2. Double displacement

✔ 3. Decomposition

✘ 4. Displacement

Q.51 Rama walks to her office 5 km away from home. In the morning, she covers the distance in 1 hour whereas, while returning home in the evening, she takes 15 more minutes to cover the same distance. Find her average speed (in km/h) during the two-way journey.

Ans ✘ 1. $3\frac{3}{5}$

✘ 2. $4\frac{2}{3}$

✔ 3. $4\frac{4}{9}$

✘ 4. $3\frac{1}{8}$

Q.52 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 23 :: 476 : Y

Ans
✗ 1. X = 346, Y = 29

✔ 2. X = 322, Y = 34

✗ 3. X = 314, Y = 21

✗ 4. X = 368, Y = 27

Q.53 Which of the following teams was the winner of the 17th Edition of Indian Premier league in 2024?

Ans
✔ 1. Kolkata Knightriders

✗ 2. Gujarat Titans

✗ 3. Mumbai Indians

✗ 4. Delhi Capitals

Q.54 The shopkeeper offers two successive discounts on a machine that is marked at ₹18,000 so that its selling price gets reduced to ₹12,960. If 10% and x % are the respective discounts, the value of x is:

Ans
✗ 1. 15

✔ 2. 20

✗ 3. 10

✗ 4. 12

Q.55 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. E sits third from the left end. Only three people sit between G and E. B is the immediate neighbour of C and F. D sits second to the left of C.

How many people sit between A and F?

Ans
✗ 1. Two

✗ 2. One

✗ 3. Three

✔ 4. Four

Q.56 A ball of mass 0.5 kg is thrown vertically upwards and rises to a height of 20 m. The initial velocity of the ball is: (Consider $g = 10 \text{ m/s}^2$)

Ans ✗ 1. 10 m/s

✔ 2. 20 m/s

✗ 3. 15 m/s

✗ 4. 25 m/s

Q.57 What will come in the place of '?' in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

$8 \times 2 + 3 - 2 \div 6 = ?$

Ans ✔ 1. 13

✗ 2. 14

✗ 3. 11

✗ 4. 12

Q.58 When did the Department for Promotion of Industry and Internal Trade (DPIIT) organise the Startup India Innovation Week 2024?

Ans ✔ 1. 10 January 2024 to 18 January 2024

✗ 2. 12 January 2024 to 20 January 2024

✗ 3. 13 January 2024 to 21 January 2024

✗ 4. 11 January 2024 to 19 January 2024

Q.59 When 0.292929...... is converted into a fraction, then the result is:

Ans ✗ 1. $\dfrac{1}{5}$

✗ 2. $\dfrac{2}{9}$

✔ 3. $\dfrac{29}{99}$

✗ 4. $\dfrac{29}{100}$

Q.60 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) * 9 # 1 £ 2 4 & 3 Ω 6 @ 8 $ 7 5 & % (Right)

How many such symbols are there, each of which is immediately preceded by a symbol and also immediately followed by a number?

Ans ✗ 1. More than two

✗ 2. Two

✗ 3. One

✔ 4. Zero

Q.61 The sum of the first 8 prime numbers divided by 7 is equal to _____.

Ans ✗ 1. 14

✗ 2. 10

✗ 3. 13

✔ 4. 11

Q.62 Which of the following solutions is identified by smell?

Ans ✗ 1. Potassium permanganate in water

✗ 2. Sugar in water

✔ 3. Dettol in water

✗ 4. Salt in water

Q.63 For current carrying circular loop, the field strength is:

Ans ✗ 1. maximum at the periphery

✗ 2. undetermined at the periphery

✗ 3. minimum at the centre

✔ 4. maximum at the centre

Q.64 FKUZ is related to CORD in a certain way based on the English alphabetical order. In the same way, QJKH is related to NNHL. To which of the following options is JIBP related, following the same logic?

Ans ✗ 1. FNAT

✗ 2. HMZU

✗ 3. HOZS

✔ 4. GMYT

Q.65 In the food vacuole of which organism, complex substances are broken down into simpler ones which then diffuse into the cytoplasm?

Ans ✗ 1. Plasmodium

✔ 2. Amoeba

✗ 3. Spirogyra

✗ 4. Lichen

Q.66 If the length of a conductor is tripled, keeping other factors same, the resistance of the conductor will be:

Ans ✔ 1. tripled

✗ 2. same

✗ 3. one sixth

✗ 4. one third

Q.67 In a certain code language, 'MEANS' is coded as '75821', 'RANGE' is coded as '84592', and 'PRIME' is coded as '64237'. What is the code for 'G' in the given code language?

Ans
- ✗ 1. 4
- ✗ 2. 8
- ✗ 3. 5
- ✓ 4. 9

Q.68 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some trees are flowers.

All flowers are leaves.

Conclusions:

(I) All leaves are trees.

(II) All flowers are trees.

Ans
- ✓ 1. Neither conclusion (I) nor (II) follows.
- ✗ 2. Only conclusion (II) follows.
- ✗ 3. Both conclusions (I) and (II) follow.
- ✗ 4. Only conclusion (I) follows.

Q.69 On 26 June 2024, the Defence Research and Development Organisation (DRDO) handed over which of the following to the Indian Navy?

Ans
- ✗ 1. Anti-Submarine Warfare Helicopter
- ✗ 2. Advanced Torpedo
- ✓ 3. Medium Range-Microwave Obscurant Chaff Rocket (MR-MOCR)
- ✗ 4. Long Range Surface-to-Air Missile

Q.70 A, B, C, D, E and F are sitting around a circular table facing the centre. D sits to the immediate left of F. B is the immediate neighbour of C and F. A is the immediate neighbour of E and C.

What is the position of D with respect to E?

Ans
- ✓ 1. Immediate right
- ✗ 2. Third to the left
- ✗ 3. Third to the right
- ✗ 4. Second to the left

Q.71 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some ribbons are balloons.

Some balloons are eagles.

Conclusions:

(I) All eagles are ribbons.

(II) No ribbons are eagles.

Ans   ✗ 1. Only conclusion (II) follows

✗ 2. Both conclusions (I) and (II) follow

✔ 3. Neither conclusion (I) nor (II) follows

✗ 4. Only conclusion (I) follows

Q.72 HD Kumaraswamy, who won from Mandya parliamentary seat in Karnataka in 2024 general elections and became Minister of Heavy Industries, belongs to which political party?

Ans   ✗ 1. BSR Congress

✗ 2. Communist Party of India

✔ 3. Janata Dal (S)

✗ 4. Bhartiya Janata Party

Q.73 According to the Economic Survey 2023-24, India's cumulative installed solar power capacity reached _____ on 30 April 2024, after adding 15.03 GW in 2023-24.

Ans   ✗ 1. 89.64 GW

✔ 2. 82.64 GW

✗ 3. 80.64 GW

✗ 4. 86.64 GW

Q.74 In this question, two statements, I and II, have been given. These statements maybe independent causes, or effects of independent causes or a common cause. One of the statements maybe the effect of the other statement. Read both the statements and select the correct answer.

I. Government authorities of city X are finding different solutions to reduce air pollution in the city during winter.

II. City X has seen an acute rise in asthma cases during the last winter.

Ans ✗ 1. I is the cause and II is its possible effect.

✗ 2. Both I and II are independent causes.

✔ 3. II is the cause and I is its possible effect.

✗ 4. Both I and II are effects of independent causes.

Q.75 The value of K, satisfying the equation $\frac{0.009}{K} = 0.01$ is:

Ans ✔ 1. 0.9

✗ 2. 9

✗ 3. 0.09

✗ 4. 0.0009

2024/12/02-23:31:54

Test Date	28/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 What compound is formed when dilute hydrochloric acid is added to a beaker containing a small amount of copper oxide?

Ans ✗ 1. Copper (IV) Chloride

✔ 2. Copper (II) Chloride

✗ 3. Copper (I) Chloride

✗ 4. Copper (III) Chloride

Q.2 Metabolic activities that generate nitrogenous waste material in human being are removed by:

Ans ✗ 1. the circulatory system

✔ 2. the excretory system

✗ 3. the respiratory system

✗ 4. the vascular system

Q.3 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left)   # 1 * £ 5 8 $ 4 2 & % 6 7 & @ 3 Ω 9   (Right)

How many such symbols are there, each of which is immediately preceded by a number and also immediately followed by a symbol?

Ans ✗ 1. Zero

✗ 2. Two

✗ 3. One

✔ 4. More than two

Q.4 What are the basic building units of organisms?

Ans ✔ 1. Cells

✘ 2. Tissues

✘ 3. Fibres

✘ 4. Bones

Q.5 Which of the following options should come in place of the question mark (?) in the given series?

7   13   25   ?   97   193

Ans ✘ 1. 35

✘ 2. 32

✔ 3. 49

✘ 4. 39

Q.6 In a certain code language, 'GLOBE' is coded as '84315', 'GRADE' is coded as '89265', and 'BAKED' is coded as '12756'. What is the code for 'R' in the given code language?

Ans ✔ 1. 9

✘ 2. 2

✘ 3. 6

✘ 4. 8

Q.7 The power of a body can be measured in both Kilowatt (KW) as well as Watt(W). Then the value of 1 KW in terms of Watt is:

Ans ✘ 1. 100

✘ 2. 10000

✘ 3. 10

✔ 4. 1000

Q.8 _____ was awarded the Green Energy Champion Award for 2023-24 at a meeting hosted by the Indian Wind Power Association in Coimbatore on 18 August 2024.

Ans ✘ 1. Kerala

✘ 2. Uttar Pradesh

✘ 3. Gujarat

✔ 4. Andhra Pradesh

Q.9 How many medals were secured by India in Paris Olympics 2024?

Ans ✗ 1. Three

✗ 2. Four

✗ 3. Five

✓ 4. Six

Q.10 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All kites are monkeys.

All monkeys are ants

Conclusions:

(I) Some ants are kites.

(II) Some monkeys are not kites.

Ans ✓ 1. Only conclusion (I) follows.

✗ 2. Only conclusion (II) follows.

✗ 3. Both conclusions (I) and (II) follow.

✗ 4. Neither conclusion (I) nor (II) follows.

Q.11 Anthony starts from Point A and drives 9 km towards West. He takes a left turn, drives 3 km, turns left again and drives 13 km. He then takes a right turn and drives 2 km. He takes a final right turn, drives 4 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90 degrees turns only unless specified.)

Ans ✗ 1. 7 km towards the South

✗ 2. 9 km towards the North

✓ 3. 5 km towards the North

✗ 4. 13 km towards the West

Q.12 A vendor sold 10 toffees for a rupee, thereby gaining 20%. How many did he buy for a rupee?

Ans ✗ 1. 6

✗ 2. 10

✗ 3. 8

✓ 4. 12

Q.13 If each vowel in the word ENGLISH is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the second position from the left in the new group of letters thus formed?

Ans ✔ 1. M

✘ 2. J

✘ 3. F

✘ 4. R

Q.14 What is the path of an object when it is in uniform motion?

Ans ✘ 1. An ellipse

✔ 2. A straight line

✘ 3. A parabola

✘ 4. A circle

Q.15 Which of the following teams was the winner of 2^d edition of Women's Premier League?

Ans ✘ 1. Mumbai Indians

✔ 2. Royal Challengers Bangalore (Bengaluru)

✘ 3. Delhi Capitals

✘ 4. UP Warriorz

Q.16 Which of the following is a prime number?

Ans ✘ 1. 221

✘ 2. 161

✔ 3. 373

✘ 4. 437

Q.17 An object is placed between the focus and the pole of a concave mirror, the image formed will be:

Ans ✘ 1. Real, inverted and diminished

✘ 2. Real, inverted and enlarged

✘ 3. Virtual, erect and diminished

✔ 4. Virtual, erect and enlarged

Q.18 Seven people, A, B, C, D, E, F and G are sitting in a straight line, facing north.

Only two people sit to the left of F. F sits second to the right of G. E sits second to the right of F. C sits fourth to the right of B. D sits second to the left of C. A sits an immediate right of C.

How many people sit between B and G?

Ans ✔ 1. None

✗ 2. Two

✗ 3. Three

✗ 4. One

Q.19 If the number 6484a6 is divisible by 8, then find the least value of a.

Ans ✗ 1. 7

✗ 2. 0

✔ 3. 1

✗ 4. 3

Q.20 3 pencils and 5 pens together cost ₹101, whereas 5 pencils and 3 pens together cost ₹91. The cost of 2 pencils and 2 pens together is:

Ans ✗ 1. ₹45

✗ 2. ₹32

✗ 3. ₹36

✔ 4. ₹48

Q.21 When white light is dispersed by a glass prism into seven colours, out of the following colours which colour will be deviated the least?

Ans ✔ 1. Yellow

✗ 2. Green

✗ 3. Indigo

✗ 4. Blue

Q.22 What is the position of the apical meristematic tissue in a plant body?

Ans ✗ 1. Near to the root region only

✗ 2. Near the node

✗ 3. On the lateral side of the stem and roots

✔ 4. At the growing tips of the stems and roots

Q.23 All 36 people are standing in a row, facing north. Aman is 11th from the left end, while Pratha is 12th from the right end. How many people are there between Aman and Pratha?

Ans
✗ 1. 15

✗ 2. 18

✗ 3. 10

✔ 4. 13

Q.24 Select the correct statement(s).

A. Testosterone brings about changes in appearance seen in boys at the time of puberty.

B. Progesterone brings about changes in appearance seen in boys at the time of puberty.

Ans
✗ 1. Both the statements are true.

✗ 2. Both the statements are false.

✗ 3. Statement B is true but A is false.

✔ 4. Statement A is true but B is false.

Q.25 If $48 : x :: x : 75$, and $x > 0$, then what is the value of x ?

Ans
✗ 1. 57

✗ 2. 63

✗ 3. 51

✔ 4. 60

Q.26 A and B can together complete a piece of work in 5 days. They worked together for 4 days and then B left. After another 2 days, A completed the remaining work. In how many days can A complete the entire work alone?

Ans
✗ 1. 20

✗ 2. 5

✔ 3. 10

✗ 4. 15

Q.27 Identify the simplest compound formed by carbon that is used widely as fuel.

Ans
✗ 1. Propane

✗ 2. Methyl

✗ 3. Ethane

✔ 4. Methane

Q.28 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✓ 1. AK – VH

✗ 2. LV – GQ

✗ 3. SC – NX

✗ 4. YI – TD

Q.29 The present ages of three persons are in ratio 4 : 5 : 6. Eight years ago, the sum of their ages was 51. Find the present age of the eldest person.

Ans ✗ 1. 28 years

✗ 2. 45 years

✗ 3. 36 years

✓ 4. 30 years

Q.30 Study the following table and answer the question.

The table shows the number of people who visited hill stations A and B in the years from 2011 to 2013.

Year	A	B
2011	777	566
2012	675	289
2013	470	978

What is the absolute difference between the number of people who visited hill station A in the year 2011 to the number of people who visited hill station B in the same year?

Ans ✗ 1. 112

✗ 2. 312

✗ 3. 102

✓ 4. 211

Q.31 Who became the first woman fighter pilot to join the elite 18 'Flying Bullets' squadron in 2024?

Ans ✓ 1. Mohana Singh

✗ 2. Bhawana Kanth

✗ 3. Avani Chaturvedi

✗ 4. Shivangi Singh

Q.32 The average of the prime numbers between 11 and 30, both excluded, is:

Ans ✔ 1. 20.2

✗ 2. 20.3

✗ 3. 19.6

✗ 4. 19.5

Q.33 In this question, two statements, I and II, have been given. These statements maybe independent causes, or effects of independent causes or a common cause. One of the statements maybe the effect of the other statement. Read both the statements and select the correct answer.

I. Most teachers of school X have left the school and joined school Y.

II. The football team of school X has won the champion's trophy in the inter-city football championship.

Ans ✔ 1. Both I and II are effects of independent causes.

✗ 2. Both I and II are independent causes.

✗ 3. II is the cause and I is its possible effect.

✗ 4. I is the cause and II is its possible effect.

Q.34 The Public Examinations (Prevention of Unfair Means) Act, 2024 that aims to prevent unfair means in public examinations and common entrance tests held across the country, came into effect in which month of 2024?

Ans ✗ 1. August

✔ 2. June

✗ 3. May

✗ 4. July

Q.35 Seven people, A, B, C, D, E, F and G are sitting in a straight line, facing north.

Only two people sit to the left of D. F sits second to the left of D. G sits second to the right of E. E sits second to the right of D. A sits second to the left of B. A is not an immediate neighbour of F.

Who sits at the extreme right end of the line?

Ans ✔ 1. G

✗ 2. C

✗ 3. A

✗ 4. B

Q.36 I walk at a speed of 10 km/h and reach the destination in 2 hrs, exactly on time. If I increase my speed by 5 km/h, how early would I reach my destination?

Ans ✗ 1. 50 min

✗ 2. 20 min

✔ 3. 40 min

✗ 4. 30 min

Q.37 If, in the quadrilateral JKLM, the measures of the angles J, K, L, and M are in the ratio 2 : 3 : 5 : 6, then the quadrilateral is a:

Ans ✗ 1. Kite

✗ 2. parallelogram

✔ 3. trapezium

✗ 4. square

Q.38 The work done in moving a charge +Q across two points having a potential difference K is:

Ans ✗ 1. 2QK

✗ 2. QK/2

✗ 3. QK/4

✔ 4. QK

Q.39 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 793 :: 679 : Y

Ans ✗ 1. X = 848, Y = 519

✗ 2. X = 886, Y = 443

✗ 3. X = 923, Y = 481

✔ 4. X = 974, Y = 498

Q.40 In the female reproductive organ of flower, the swollen bottom part is the _____, middle elongated part is the _____ and the terminal part that may be sticky is the stigma.

Ans ✗ 1. zygote, pollen tube

✔ 2. ovary, style

✗ 3. style, ovary

✗ 4. bud, style

Q.41 If A means +, B means −, C means ×, D means ÷, then what will come in place of the question mark (?) in the following equation?

91 D 13 B 4 A 3 C 2 = ?

Ans ✗ 1. 7

✗ 2. 10

✓ 3. 9

✗ 4. 8

Q.42 Using $\pi = \frac{22}{7}$, find the total surface area of a closed cylinder having a base radius of 70 m and height of 110 m.

Ans ✗ 1. 82,400 m^2

✓ 2. 79,200 m^2

✗ 3. 82,500 m^2

✗ 4. 78,500 m^2

Q.43 Which of the following numbers represent the atomic mass of calcium?

Ans ✗ 1. 14 u

✗ 2. 32 u

✗ 3. 16 u

✓ 4. 40 u

Q.44 Where was the Fifth Global Standards Symposium (GSS-24) held?

Ans ✗ 1. Mumbai

✗ 2. Chennai

✗ 3. Bengaluru

✓ 4. New Delhi

Q.45 Particles of matter are continuously moving because of _____.

Ans ✗ 1. size of particles

✗ 2. potential energy

✗ 3. intermixing of particles

✓ 4. kinetic energy

Q.46 Which of the following statements is INCORRECT about 'nature of a carbon compound'?

Ans ✔ 1. Compounds of carbon are only formed with oxygen.

✘ 2.
Compounds of carbon having double or triple bonds between their carbon atoms are called unsaturated compounds.

✘ 3.
Carbon has the unique ability to form bonds with other atoms of carbon, giving rise to large molecules. This property is called catenation.

✘ 4.
Compounds of carbon, which are linked by only single bonds between the carbon atoms, are called saturated compounds.

Q.47 As per Women, Business and the Law 2024 (WBL2024), India scores ____ out of 100.0.

Ans ✔ 1. 74.4

✘ 2. 70.4

✘ 3. 71.4

✘ 4. 75.4

Q.48 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

UZW, TYV, SXU, RWT, ?

Ans ✔ 1. QVS

✘ 2. QSV

✘ 3. SQV

✘ 4. SVQ

Q.49 NCPJ is related to PFTO in a certain way based on the English alphabetical order. In the same way, QAVB is related to SDZG. To which of the following options is UIND related, following the same logic?

Ans ✘ 1. VMRJ

✘ 2. XLSI

✔ 3. WLRI

✘ 4. VKRJ

Q.50 Consider a long current carrying solenoid. If Rahul plots the magnetic field lines inside this long current carrying solenoid, then it appears:

Ans ✔ 1. uniform at all points

✘ 2. denser at the ends

✘ 3. denser in the middle

✘ 4. to increase from one end to another

Q.51 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

34D54C18A18B324 = ?

Ans
✗ 1. 202

✗ 2. 204

✗ 3. 404

✓ 4. 304

Q.52 Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which pair does NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

Ans
✗ 1. DH – CG

✓ 2. XB – YC

✗ 3. TX – SW

✗ 4. BF – AE

Q.53 When an object falls under gravity, the object experiences:

Ans
✗ 1. a deceleration

✓ 2. an acceleration

✗ 3. a force only when it hits the surface of the earth

✗ 4. no external force

Q.54 In a country, 55% of the population are females. 80% of the male population is literate. What percentage of females are literate if the total literacy rate is 58%?

Ans
✗ 1. 20%

✗ 2. 45%

✓ 3. 40%

✗ 4. 55%

Q.55 What is the name of the project launched by the Ministry of Culture in 2024 to showcase India's artistic heritage through public art installations?

Ans
✗ 1. Project SANSKRITI

✓ 2. Project PARI

✗ 3. Project BHARATI

✗ 4. Project KALA

Q.56 Find the simple interest on ₹3,000 as a sum borrowed at 4% per year rate of interest for 5 years.

Ans   ✗ 1. ₹800

✗ 2. ₹300

✔ 3. ₹600

✗ 4. ₹400

Q.57 In colloids, which of the following is a correct example of foam?

Ans   ✗ 1. Jelly

✗ 2. Mist

✔ 3. Pumice

✗ 4. Fog

Q.58 ICICI Bank has partnered with which of the following agencies in October 2024 to provide instant credit on UPI for pre-approved customers, offering up to ₹2 lakh credit with a 45-day repayment period?

Ans   ✔ 1. PhonePe

✗ 2. Google Pay

✗ 3. Paytm

✗ 4. BharatPe

Q.59 In a certain code language,

'A # B' means 'A is the mother of B',

'A – B' means 'A is the brother of B',

'A x B' means 'A is the wife of B'

and 'A = B' means 'A is the father of B'.

How is N related to S if 'N – P # S x T'?

Ans   ✗ 1. Father's brother

✔ 2. Mother's brother

✗ 3. Father's father's brother

✗ 4. Father's mother

Q.60 Select the pair which follows the same pattern as that followed by the two set of pairs given below. Both pairs follow the same pattern.

WGN : ZDQ

IUZ : LRC

Ans ✗ 1. PXH : LCD

✔ 2. CAT : FXW

✗ 3. DMV : HHZ

✗ 4. URL : STI

Q.61 The smallest natural number that must be multiplied with 1083 to make it a perfect square is:

Ans ✗ 1. 2

✗ 2. 11

✔ 3. 3

✗ 4. 4

Q.62 In a certain code language, 'CODE' is coded as '5739' and 'LEGS' is coded as '4256'. What is the code for 'E' in the given code language?

Ans ✗ 1. 6

✗ 2. 9

✔ 3. 5

✗ 4. 2

Q.63 Two students appeared in an examination. One of them secured 9 marks more than the other and his marks were 56% of the sum of their marks. The marks obtained by them were:

Ans ✗ 1. 43 and 34

✗ 2. 41 and 32

✗ 3. 39 and 30

✔ 4. 42 and 33

Q.64 Which of the following options gives the correct expression for y, when $\frac{cos^2 A}{1-sin A} = y$, and $sinA \neq 1$?

Ans ✗ 1. $secA + tanA$

✗ 2. $cosA + 1$

✔ 3. $sinA + 1$

✗ 4. $cosecA$

Q.65 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

LNR, MOS, NPT, OQU, ?

Ans ✗ 1. PVR

✗ 2. VPR

✔ 3. PRV

✗ 4. VRP

Q.66 Identify the INCORRECT sentence(s).

a. Some organisms use simple food material obtained from inorganic sources in the form of carbon dioxide and water.

b. Other organisms utilise complex substances which are broken down into simpler ones before they can be used for the upkeep and growth of the body.

c. Heterotrophic organisms include plants.

Ans ✗ 1. Only a and b

✗ 2. Only a

✗ 3. Only b and c

✔ 4. Only c

Q.67 For how many days will the Ashtalakshmi Mahotsav be celebrated in December 2024?

Ans ✔ 1. Three days

✗ 2. One day

✗ 3. Four days

✗ 4. Two days

Q.68 A scheme like 'Buy 5, Get 6' on the same kind of articles with the same marked price offers a _____ discount.

Ans ✗ 1. $11\frac{1}{9}\%$

✗ 2. 20%

✗ 3. 17.5%

✔ 4. $16\frac{2}{3}\%$

Q.69 Which of the following is obtained by subtracting $x^2 - y^2$ from $y^2 - x^2$?

Ans ✔ 1. $-2(x^2 - y^2)$

✗ 2. $-2(x^2 + y^2)$

✗ 3. $2(x^2 + y^2)$

✗ 4. $2(x^2 - y^2)$

Q.70 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left)   9 # 1 2 @ 8 $ 7 & 3 Ω & % 4 6 * £ 5 (Right)

How many such symbols are there, each of which is immediately preceded by an even number but not immediately followed by an odd number?

Ans ✔ 1. Two

✘ 2. More than two

✘ 3. One

✘ 4. Zero

Q.71 The length of the base of a triangle is equal to the perimeter of a square whose diagonal is $7\sqrt{2}$ cm and the corresponding height of the triangle is equal to the length of a side of the square whose area is 169 sq cm. The area (in sq cm) of the triangle is:

Ans ✘ 1. 152

✘ 2. 156

✔ 3. 182

✘ 4. 130

Q.72 The average of 70 values is 40. If each value is multiplied by 20, what will be the changed average?

Ans ✘ 1. 60

✘ 2. 1400

✘ 3. 90

✔ 4. 800

Q.73 When an iron nail is dipped into a copper sulphate solution, which substance gets displaced?

Ans ✘ 1. Copper Sulphate

✘ 2. Sulphate

✔ 3. Copper

✘ 4. Iron

Q.74 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 826 :: 723 : Y

Ans ✗ 1. X = 604, Y = 1018

✗ 2. X = 593, Y = 941

✔ 3. X = 542, Y = 1007

✗ 4. X = 518, Y = 984

Q.75 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some parrots are monkeys.

Some bears are monkeys.

Conclusions:

(I) All bears are parrots.

(II) Some monkeys are not bears.

Ans ✗ 1. Only conclusion (I) follows.

✗ 2. Only conclusion (II) follows.

✔ 3. Neither conclusion (I) nor (II) follows.

✗ 4. Both conclusions (I) and (II) follow.

2024/12/02-23:06:07

Test Date	29/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 If LCM (27, n) = 54 and HCF (27, n) = 9, then the value of n is:

Ans ✗ 1. 24

✗ 2. 36

✗ 3. 54

✔ 4. 18

Q.2 Which of the following statements is correct about continuous movement of particles of matter?

Ans ✗ 1. If we increase the temperature, kinetic energy of particles decreases.

✗ 2. Change in temperature has no effect on the kinetic energy of particles.

✔ 3. If we increase the temperature, kinetic energy of particles increases.

✗ 4. If we decrease the temperature, kinetic energy of particles increases.

Q.3 The cost price of a toy is ₹210. What should be its marked price so that, after a discount of 5%, the shopkeeper gains 90%?

Ans ✗ 1. ₹400

✔ 2. ₹420

✗ 3. ₹480

✗ 4. ₹450

Q.4 A 250 m long train running at a speed of 100 km/h crosses another train, coming from the opposite direction at a speed of 62 km/h, in 10 seconds. What is the length of the second train?

Ans ✗ 1. 270 m

✗ 2. 240 m

✗ 3. 230 m

✔ 4. 200 m

Q.5 The value of $(x - y)(x + y) + (y - z)(y + z) + (z - x)(z + x)$ is:

Ans ✗ 1. $x^2 + y^2 + z^2$

✗ 2. $x + y + z$

✗ 3. $xy + yz + zx$

✔ 4. 0

Q.6 A sum of money, on compound interest, amounts to ₹5,290 in 2 years and to ₹6,083.50 in 3 years. If interest is compounded annually, then the rate of interest per annum is:

Ans ✔ 1. 15%

✗ 2. 14%

✗ 3. $16\frac{2}{3}\%$

✗ 4. 12%

Q.7 The full form of SER, a cell organelle, which helps in the manufacture of fat molecules, or lipids, important for cell function is _____.

Ans ✗ 1. Similar Endoplasmic Reticulum

✗ 2. Species Endoplasmic Reticulum

✗ 3. Simple Endoplasmic Reticulum

✔ 4. Smooth Endoplasmic Reticulum

Q.8 Mr. Hari spends 36% of his income on food items and 25% of the remaining amount on clothes, medical and conveyance. He saves half of the remaining amount every month. If he saves ₹1,80,000 every year, then find his monthly income.

Ans ✔ 1. ₹62,500

✗ 2. ₹6,50,040

✗ 3. ₹7,50,000

✗ 4. ₹54,170

Q.9 The force exerted by the earth on the moon is:

(Consider $G = 6 \times 10^{-11} Nm^2 kg^{-2}$; mass of the earth $M = 6 \times 10^{24}$ kg; mass of the moon = 8×10^{22} kg, and distance between earth and moon is 4×10^8 m).

Ans ✔ 1. 1.8×10^{20} N

✗ 2. 1.8×10^{18} N

✗ 3. 1.8×10^{24} N

✗ 4. 1.8×10^{22} N

Q.10 Which of the following is NOT a pillar of strategic framework for achieving the objective of National State Policy 2024?

Ans ✗ 1. Strong Professional Sports Governance, Implementation and Monitoring

✔ 2. Restriction on Private Sector Engagement

✗ 3. National Framework and Regulatory Bodies

✗ 4. Technological Intervention

Q.11 Study the following graph and answer the given question.

The bar graph shows the annual exports (in crores) of a company during the period 2015 to 2019.
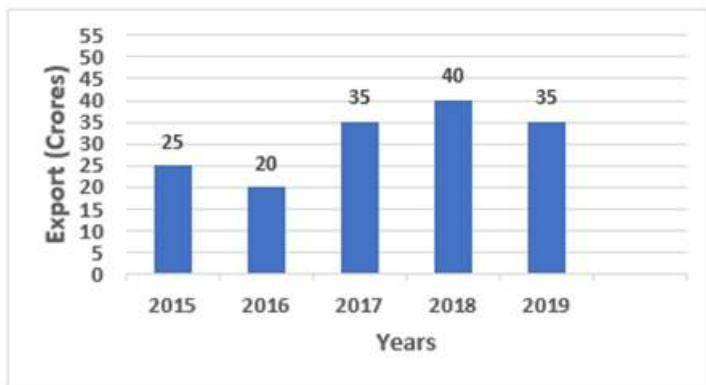
What is the respective ratio between the annual export of 2015 to the annual export of 2017?

Ans ✗ 1. 4 : 9

✗ 2. 13 : 16

✗ 3. 6 : 11

✔ 4. 5 : 7

Q.12 In a certain code language,

'A + B' means 'A is the mother of B',

'A – B' means 'A is the brother of B',

'A x B' means 'A is the wife of B' and

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M + N x P – S ÷ T'?

Ans ✗ 1. Father's brother's wife

✗ 2. Father's sister's daughter

✗ 3. Father's brother's wife's sister

✔ 4. Father's brother's wife's mother

Q.13 Select the pair which follows the same pattern as that followed by the two set of pairs given below. Both pairs follow the same pattern.

ARH : YOJ

SFP : QCR

Ans ✗ 1. FTH : BNZ

✗ 2. QPV : OLP

✔ 3. WLL : UIN

✗ 4. WBN : YFT

Q.14 In a certain code language, 'NICE' is coded as '2468' and 'CARS' is coded as '1235'. What is the code for 'C' in the given code language?

Ans ✗ 1. 1

✔ 2. 2

✗ 3. 6

✗ 4. 5

Q.15 8 men and 12 women can build a wall in 10 days. 6 men and 8 women can build the same wall in 14 days. How long will it take for 1 woman to build it alone?

Ans ✗ 1. 140 days

✔ 2. 280 days

✗ 3. 700 days

✗ 4. 350 days

Q.16 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✔ 1. TB - ZF

✗ 2. SA – PX

✗ 3. LT – IQ

✗ 4. EM – BJ

Q.17 Nadi Utsav 2024 was inaugurated at the _____.

Ans ✔ 1. Indira Gandhi National Centre for the Arts (IGNCA)

✗ 2. National Museum

✗ 3. India Habitat Centre

✗ 4. Lalit Kala Akademi

Q.18 Where were the indigenously developed Param Rudra Supercomputers deployed, in September 2024?

Ans ✗ 1. Bengaluru, Delhi and Mumbai

✔ 2. Pune, Delhi and Kolkata

✗ 3. Pune, Bengaluru and Kolkata

✗ 4. Mumbai, Bengaluru and Kolkata

Q.19 If the resistance of a conductor is increased to three times, then the current will be:

(voltage V remains constant)

Ans ✗ 1. three times

✔ 2. one third

✗ 3. nine times

✗ 4. one ninth

Q.20 Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(9, 6, 56)

(7, 8, 58)

Ans ✗ 1. (12, 10, 118)

✗ 2. (8, 5, 40)

✔ 3. (5,11, 57)

✗ 4. (6, 5, 40)

Q.21 If θ is an acute angle, find the denominator D, when

$$(cot\,\theta - cosec\,\theta)^2 = \frac{1 - cos\,\theta}{D}$$

Ans ✗ 1. $-1 - cos\,\theta$

✗ 2. $1 + sin\,\theta$

✗ 3. $-sin\,\theta - 1$

✔ 4. $1 + cos\,\theta$

Q.22 Out of his total income, Sanjay spends 20% on house rent and 70% of the rest on household expenses. If he saves ₹1,800, then his total income is:

Ans
  ✗ 1. ₹9,000

  ✓ 2. ₹7,500

  ✗ 3. ₹8,000

  ✗ 4. ₹10,000

Q.23 What is used in the preparation of calcium sulphate hemihydrate?

Ans
  ✗ 1. Copper Sulphate

  ✗ 2. Sodium Hydrogen Carbonate

  ✗ 3. Sodium Carbonate

  ✓ 4. Gypsum

Q.24 Two circular coils A and B, have the same radius R, and carry the same current I, but have 50 and 100 turns, respectively. The magnetic field produced:

Ans
  ✗ 1. by A > that of B

  ✓ 2. by B > that of A

  ✗ 3. by A = by B

  ✗ 4. by A and B are undetermined

Q.25 In this question, two statements, I and II, have been given. These statements maybe independent causes, or effects of independent causes or a common cause. One of the statements maybe the effect of the other statement. Read both the statements and select the correct answer.

I. Citizens of city X have multiplied their wealth by investing in government schemes in the past two years.

II. City X has seen a recent rise in the number of luxury cars.

Ans
  ✗ 1. II is the cause and I is its possible effect.

  ✓ 2. Both I and II are effects of independent causes.

  ✗ 3. I is the cause and II is its possible effect.

  ✗ 4. Both I and II are independent causes.

Q.26 If the mean of 22, 25, 27, 24 and x is 26, then the value of x is:

Ans
  ✓ 1. 32

  ✗ 2. 35

  ✗ 3. 41

  ✗ 4. 28

Q.27 For which book did Gaurav Pandey win the Sahitya Akademi Yuva Puraskar in 2024?

Ans ✗ 1. Manzil Ki Talaash

✔ 2. Smritiyon Ke Beech Ghiri Hai Prithvi

✗ 3. Jeevan Ka Rang

✗ 4. Kavya Ka Prakash

Q.28 Where was the fifth India-U.S. 2+2 Ministerial Dialogue held on 10 November 2023?

Ans ✔ 1. New Delhi

✗ 2. New York

✗ 3. Mumbai

✗ 4. Washington, DC

Q.29 What is the purpose of making urine in the human body?

Ans ✗ 1. To remove CO_2 from the blood in the lungs

✗ 2. To clean the impure blood coming to the heart

✔ 3. To filter out waste products from the blood

✗ 4. To empty the urinary bladder

Q.30 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

GJF, ILH, KNJ, MPL, ?

Ans ✗ 1. RON

✔ 2. ORN

✗ 3. RNO

✗ 4. ONR

Q.31 The smallest natural number that must be added to 1212 to make it a perfect square is:

Ans ✔ 1. 13

✗ 2. 18

✗ 3. 24

✗ 4. 27

Q.32 What is used to remove permanent hardness of water?

Ans ✗ 1. Bleaching powder

✗ 2. Sodium Hydroxide

✔ 3. Washing soda

✗ 4. Baking soda

Q.33 If A means +, B means −, C means ×, D means ÷, then what will come in place of the question mark (?) in the following equation?

18 D 2 A 4 C 5 B 15 = ?

Ans ✗ 1. 12

✗ 2. 16

✗ 3. 18

✔ 4. 14

Q.34 If each vowel in the word FRIENDLY is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the second position from the right in the new group of letters thus formed?

Ans ✗ 1. C

✗ 2. J

✔ 3. K

✗ 4. Q

Q.35 Sally starts from Point A and drives 12 km towards North. She takes a right turn, drives 5 km, and takes another right turn and drives 24 km. She turns right again and drives 17 km, she takes a final right turn, drives 12 km and stops at Point P. How far (shortest distance) and in which direction is she from her starting point? (All turns are 90 degrees turns only unless specified.)

Ans ✗ 1. 22 km towards the North

✔ 2. 12 km towards the West

✗ 3. 12 km towards the East

✗ 4. 5 km towards the East

Q.36 A dishonest shopkeeper claimed to have sold an item at ₹23/kg, which cost him ₹25/kg. However, by using faulty weights, he gave only 600 gm instead of 1 kg. What is his total percentage profit or loss?

Ans ✗ 1. 23% loss

✗ 2. $62\frac{1}{2}$% profit

✔ 3. $53\frac{1}{3}$% profit

✗ 4. 20% loss

Q.37 What was the theme of 'Financial Literacy Week 2024', conducted by the Reserve Bank of India from 26 February to 01 March 2024?

Ans ✗ 1. Good Financial Behaviour, Your Saviour

✓ 2. Make a Right Start : Become Financially Smart

✗ 3. Go Digital, Go Secure

✗ 4. Credit Discipline and Credit from Formal Institutions

Q.38 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All flowers are diamonds.

Some clips are flowers.

Conclusions:

(I) All diamonds are clips.

(II) Some diamonds are flowers.

Ans ✗ 1. Both conclusions (I) and (II) follow

✗ 2. Only conclusion (I) follows

✓ 3. Only conclusion (II) follows

✗ 4. Neither conclusion (I) nor (II) follows

Q.39 In organisms such as Amoeba, the splitting of the two cells during division can take place in _____.

Ans ✓ 1. any plane

✗ 2. one fixed plane

✗ 3. two fixed planes

✗ 4. multiple equal planes

Q.40 The diagonal and one side of a rectangular plot are 65 m and 63 m, respectively. What is the perimeter of the rectangular plot?

Ans ✗ 1. 164 m

✗ 2. 166 m

✓ 3. 158 m

✗ 4. 156 m

Q.41 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

225 B 15 A 15 C 125 D 225=?

Ans ✗ 1. 135

✗ 2. 105

✔ 3. 125

✗ 4. 115

Q.42 In triangle ABC, $\overline{AB}$ = 6 m, $\overline{BC}$ = 8 m, and $\overline{AC}$ = 10 m. In triangle PRQ, $\overline{PR}$ = 8 m, $\overline{PQ}$ = 10 m, and $\overline{RQ}$ = 6 m. Which of the following is a correct order of congruency?

Ans ✔ 1. ▲BCA congruent to ▲RPQ

✗ 2. ▲CBA congruent to ▲RPQ

✗ 3. ▲BAC congruent to ▲RPQ

✗ 4. ▲ABC congruent to ▲RPQ

Q.43 Which of the following events is a consequence of atmospheric refraction?

Ans ✗ 1. Image formation by plain mirrors

✗ 2. Rainbow formation

✔ 3. Advance sunrise and delayed sunset

✗ 4. Shaving mirrors to form large image of face

Q.44 Which of the following options should come in place of the question mark (?) in the given series?

7 15 24 34 45 ?

Ans ✗ 1. 60

✔ 2. 57

✗ 3. 58

✗ 4. 55

Q.45 Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(144, 12, 6)

(210, 15, 7)

Ans ✔ 1. (96, 8, 6)

✗ 2. (180, 9, 11)

✗ 3. (100,10,4)

✗ 4. (156, 13, 7)

Q.46 Which of the following is a saturated carbon compound?

Ans
  ✗ 1. Alkene

  ✗ 2. Ethylene

  ✔ 3. Alkane

  ✗ 4. Alkyne

Q.47 Which of the following is the formulas unit mass of NaCl?

Ans
  ✗ 1. 46.5 u

  ✗ 2. 94 u

  ✔ 3. 58.5 u

  ✗ 4. 71 u

Q.48 If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same work in 2 days, then the time taken by 10 men and 20 boys for doing the same piece of work will be:

Ans
  ✗ 1. 3 days

  ✗ 2. 4 days

  ✔ 3. 5 days

  ✗ 4. 2 days

Q.49 The pollen needs to be transferred from the stamen to the stigma. If this transfer of pollen occurs in the same flower, it is referred to as _____. On the other hand, if the pollen is transferred from one flower to another, it is known as _____.

Ans
  ✔ 1. self-pollination, cross pollination

  ✗ 2. cross pollination, self-pollination

  ✗ 3. transversion, translocation

  ✗ 4. translocation, transversion

Q.50 _____, the Managing Editor of Mongabay India, received the 2024 Greenaccord International Media Award at a ceremony in Frascati, Italy on October 12, 2024.

Ans
  ✔ 1. S Gopikrishna Warrier

  ✗ 2. Surjit Singh

  ✗ 3. P Swaminathan Iyer

  ✗ 4. Laxman Naik

Q.51 Which of the following statements is correct about suspension?

Ans ✗ 1. Particles of a suspension are invisible to the naked eye.

  ✗ 2. A Suspension is a homogeneous mixture.

  ✔ 3. A Suspension is a heterogeneous mixture.

  ✗ 4. Solids dispersed in gas are called suspensions.

Q.52 A car decreases its speed from 40 m/s to 20 m/s in 5 s. Find the acceleration of the car.

Ans ✗ 1. $4 \, m/s^2$

  ✗ 2. $2 \, m/s^2$

  ✔ 3. $-4 \, m/s^2$

  ✗ 4. $12 \, m/s^2$

Q.53 The kinetic energy of a moving object is dependent on which of the following quantities:

i) Mass of the body

ii) Square of the velocity

iii) Pressure

Ans ✔ 1. Both (i) and (ii)

  ✗ 2. Both (ii) and (iii)

  ✗ 3. Only (iii)

  ✗ 4. Only (i)

Q.54 According to the Centre for Monitoring Indian Economy (CMIE), India's unemployment rate in June 2024 was _____.

Ans ✗ 1. 8.2%

  ✗ 2. 10.2%

  ✗ 3. 7.9%

  ✔ 4. 9.2%

Q.55 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. SK – PH

  ✗ 2. FX – CU

  ✔ 3. UM - GZ

  ✗ 4. ME – JB

Q.56 Who among the following won the Purple cap in the 17th Edition of Indian Premier League in 2024?

Ans ✗ 1. Kuldeep Yadav

✔ 2. Harshal Patel

✗ 3. Jasprit Bumrah

✗ 4. T Natarajan

Q.57 A, B, C, D, E, F and G are sitting around a circular table facing the Centre.

D sits third to the left of F. G sits second to the left of D. G sits to the immediate right of E. B sits to the immediate left of A.

What is the position of D with respect to B?

Ans ✔ 1. Immediate left

✗ 2. Second to the right

✗ 3. Immediate right

✗ 4. Second to the left

Q.58 If $8:4::3.2:x$, what is the value of x ?

Ans ✗ 1. 1.2

✗ 2. 2.4

✗ 3. 3.2

✔ 4. 1.6

Q.59 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. Only five people sit between F and D. G sits third to the right of F. E is the immediate neighbour of C and D. B is not the immediate neighbour of G.

How many people sit between A and F?

Ans ✗ 1. Two

✗ 2. Three

✗ 3. Four

✔ 4. One

Q.60 The Central Universities (Amendment) Bill, 2023 was passed for the establishment of Sammakka Sarakka Central Tribal University in which state?

Ans ✔ 1. Telangana

✗ 2. Manipur

✗ 3. Odisha

✗ 4. Jharkhand

Q.61 If $\frac{155}{0.155} = \frac{15.5}{K}$, then the value of K is:

Ans ✗ 1. 155

✗ 2. 1.55

✓ 3. 0.0155

✗ 4. 15.51

Q.62 Which type of chemical reaction involves the exchange of ions between the reactants?

Ans ✓ 1. Double displacement reaction

✗ 2. Displacement reaction

✗ 3. Decomposition reaction

✗ 4. Combination reaction

Q.63 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

NJM, PLO, RNQ, TPS, ?

Ans ✗ 1. RVU

✓ 2. VRU

✗ 3. RUV

✗ 4. VUR

Q.64 Identify the correct match of plant hormones with their functions.

1. Gibberellins : Help in the growth of the stem

✓ Cytokinins : Promote cell division

Abscisic acid : Inhibits growth

2. Gibberellins : Help in the growth of the stem

✗ Cytokinins : Inhibits growth

Abscisic acid : Promote cell division

3. Gibberellins : Inhibits growth

✗ Cytokinins : Promote cell division

Abscisic acid : Help in the growth of the stem

4. Gibberellins : Promote cell division

✗ Cytokinins : Help in the growth of the stem

Abscisic acid : Inhibits growth

Q.65 Evaluate the given expression.

$42 \div 7 \times 2$

Ans ✗ 1. 8

✔ 2. 12

✗ 3. 3

✗ 4. 10

Q.66 All 41 people are standing in a row, facing north. Juno is 23rd from the right end, while Cherry is 31st from the left end. How many people are there between Juno and Cherry?

Ans ✗ 1. 13

✔ 2. 11

✗ 3. 12

✗ 4. 10

Q.67 A concave mirror having focal length of magnitude 20 cm forms a real image of an object placed at a distance of 60cm from the mirror. The image distance in (cm) will be:

Ans ✗ 1. -15

✗ 2. +15

✗ 3. +30

✔ 4. -30

Q.68 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 9 # 2 6 @ 8 $ Ω 1 * £ 5 7 & % 4 3 (Right)

How many such symbols are there, each of which is immediately preceded by a number and also immediately followed by a symbol?

Ans ✔ 1. More than two

✗ 2. One

✗ 3. Two

✗ 4. Zero

Q.69 FIGH is related to KNLM in a certain way based on the English alphabetical order. In the same way, RUST is related to WZXY. To which of the following options is HKIJ related, following the same logic?

Ans ✗ 1. NPLO

✗ 2. LQNO

✔ 3. MPNO

✗ 4. MQNO

Q.70 A ball of radius 10 cm is taken and a cylindrical hole of radius 1 cm is drilled through the centre. Which of the options listed below is the closest in value to the ratio of the total surface area of the hollowed out ball to the surface area of the original ball?

Ans ✗ 1. $\dfrac{221}{200}$

✗ 2. $\dfrac{1}{10}$

✗ 3. $\dfrac{11}{5}$

✔ 4. $\dfrac{219}{200}$

Q.71 Which of the following is the most common simple permanent tissue?

Ans ✗ 1. Epidermis

✗ 2. Phloem

✔ 3. Parenchyma

✗ 4. Sclerenchyma

Q.72 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some keys are pens.

All pens are watches.

Conclusions:

(I) Some watches are keys.

(II) All watches are pens.

Ans ✗ 1. Only conclusion (II) follows.

✗ 2. Neither conclusion (I) nor (II) follows.

✔ 3. Only conclusion (I) follows.

✗ 4. Both conclusions (I) and (II) follow.

Q.73 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left)   4 6 @ # 1 * £ 5   8 $ 7 & 3 2 & %   Ω 9 (Right)

How many such numbers are there, each of which is immediately preceded by a symbol and also immediately followed by a number?

Ans ✔ 1. Two

✗ 2. One

✗ 3. Zero

✗ 4. More than two

Q.74 In a certain code language, 'tiger is the king' is written as 'ki ni hi li', 'king rules the kingdom' is written as 'di li ti ni', and 'the baby is sleeping' is written as 'gi ni si ki'. How is 'tiger' written in the given language?

Ans ✗ 1. ki

✔ 2. hi

✗ 3. li

✗ 4. ni

Q.75 Thirteen years ago, Manorama's age was $\frac{2}{5}$ of that of her sister. The ratio of Manorama's and her sister's present ages is 3 : 4. What is the sum of their present ages?

Ans ✗ 1. 36 years

✗ 2. 42 years

✔ 3. 39 years

✗ 4. 48 years

2024/12/03-04:22:46

Test Date	29/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 How many such pairs of letters are there in the word JOURNEY (in forward direction), each of which has as many letter in the same sequence between them in the word as in the English alphabet?

Ans ✔ 1. Two

✘ 2. Four

✘ 3. Three

✘ 4. One

Q.2 Which of the following Acts was amended in 2023 to enhance child protection measures in India?

Ans ✘ 1. Child Labour (Prohibition and Regulation) Act

✘ 2. Right to Education Act

✔ 3. Juvenile Justice (Care and Protection of Children) Act

✘ 4. Protection of Children from Sexual Offences Act

Q.3 Which of the following types of reaction represents formation of slaked lime from calcium oxide and water?

Ans ✘ 1. Displacement reaction

✘ 2. Decomposition reaction

✔ 3. Combination reaction

✘ 4. Precipitation reaction

Q.4 Simplify: $(1 - \sec^2 \theta)(1 - \sin \theta)(1 + \sin \theta)(1 + \cot^2 \theta)$.

Ans ✘ 1. 1

✘ 2. 0

✔ 3. −1

✘ 4. 2

Q.5 If a force 'F' acts on a body such that body gets displaced through the distance 'x' in the direction of the force, then the work done by the force is _____.

Ans ✗ 1. F/x

✗ 2. x/F

✗ 3. x^2F

✓ 4. Fx

Q.6 Which of the following metals CANNOT be cut with a knife?

Ans ✗ 1. Sodium

✓ 2. Copper

✗ 3. Lithium

✗ 4. Potassium

Q.7 A car moving along a straight path slows down and stops. The car is under which type of motion?

Ans ✓ 1. Non-uniform motion

✗ 2. Circular motion

✗ 3. Uniform motion

✗ 4. Periodic motion

Q.8 Select the correct option for liquid connective tissue.

Ans ✓ 1. Areolar connective tissue

✗ 2. Blood

✗ 3. Cartilage

✗ 4. Adipose connective tissue

Q.9 Two trains of equal length, running at the speeds of 60 km/h and 40 km/h, take 50 seconds to cross each other while they are running in the same direction. What time will they take to cross each other if they are running in opposite directions?

Ans ✗ 1. 9 sec

✗ 2. 8 sec

✗ 3. 7 sec

✓ 4. 10 sec

Q.10 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some gold are silver.

Some silver are diamonds.

Conclusions:

(I) Some diamonds are gold.

(II) Some silver are gold.

Ans ✗ 1. Both conclusions (I) and (II) follow

✗ 2. Neither conclusion (I) nor (II) follows

✗ 3. Only conclusion (I) follows

✔ 4. Only conclusion (II) follows

Q.11 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

SHK, WLO, APS, ETW,?

Ans ✗ 1. IYA

✗ 2. IXB

✗ 3. JXA

✔ 4. IXA

Q.12 P is 30% more efficient than Q. How much time will they, working together, take to complete a job that P alone could have done in 23 days?

Ans ✗ 1. 11 days

✔ 2. 13 days

✗ 3. 10 days

✗ 4. $20\frac{3}{17}$ days

Q.13 In two triangles ABC and DEF, if $\overline{AB} = \overline{EF}$, $\overline{BC} = \overline{DF}$ and $\overline{CA} = \overline{DE}$, then:

Ans ✔ 1. $\triangle CBA \cong \triangle DFE$

✗ 2. $\triangle ABC \cong \triangle DEF$

✗ 3. $\triangle DEF \cong \triangle BCA$

✗ 4. $\triangle BAC \cong \triangle FDE$

Q.14 Which of the following substances can move across the cell membrane by diffusion?

Ans ✔ 1. Oxygen

✘ 2. Nucleic acid

✘ 3. Proteins

✘ 4. Starch

Q.15 Select the set, from the given options, in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(6, 13, 78)

(5, 22, 110)

Ans ✔ 1. (8, 12, 96)

✘ 2. (7, 13, 90)

✘ 3. (8, 19, 162)

✘ 4. (24, 9, 206)

Q.16 Umesh took 100 chocolates out of 250 chocolates from Ruchi. Umesh gave 20% of his chocolates to Shalaka and 35% of his chocolates to Marry. Then Ruchi gave 50% of her remaining chocolates to Umesh. Find the number of chocolates Umesh had at the end.

Ans ✘ 1. 75

✘ 2. 130

✔ 3. 120

✘ 4. 125

Q.17 An order was placed for the supply of a carpet whose breadth was 6 m and whose length were 1.44 times the breadth. What is the cost of a carpet whose length and breadth are 40% more and 25% more respectively than the first carpet. [The cost of a carpet is **Rs.** 45 per sq m.]

Ans ✘ 1. Rs. 3868.80

✘ 2. Rs. 3642.60

✘ 3. Rs. 4216.20

✔ 4. Rs. 4082.40

Q.18 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. Only two people sit to the left of A. Only three people sit between G and A. C is an immediate neighbour of F and E. D sits second to the left of F. How many people sit to the left of F?

Ans ✘ 1. One

✔ 2. Three

✘ 3. Four

✘ 4. Two

Q.19 The gravitational force between two objects of masses m_1 and m_2 is directly proportional to _____.

Ans ✗ 1. $m_1 - m_2$

✔ 2. $m_1 \times m_2$

✗ 3. $\dfrac{m_1}{m_2}$

✗ 4. $m_2 - m_1$

Q.20 India scripted history at the 2024 edition of Chess Olympiad, winning the gold medal in both the open and women's section for the _____.

Ans ✗ 1. Third time

✗ 2. Fourth Time

✔ 3. First Time

✗ 4. Second Time

Q.21 A dishonest dealer professes to sell goods at the cost price, but uses a false weight of 900 grams instead of a kg. His gain percentage is:

Ans ✔ 1. $11\frac{1}{9}\%$

✗ 2. $11\frac{2}{9}\%$

✗ 3. 10%

✗ 4. 11%

Q.22 In a row of 34 students facing North, Jignesh is 12th from the right end. If Kamlesh is 7th to the left of Jignesh, what is Kamlesh's position from the left end of the line?

Ans ✔ 1. 16th

✗ 2. 17th

✗ 3. 18th

✗ 4. 19th

Q.23 Evaluate the given expression.

$16 + 8 \div 4 - 2 \times 3$

Ans ✗ 1. 0

✗ 2. 18

✗ 3. 6

✔ 4. 12

Q.24 The median of the observations 4, 14, 11, 8, 7, 8, 9, 12, 4 and 6 is:

Ans ✗ 1. 10

✗ 2. 11

✔ 3. 8

✗ 4. 9

Q.25 When white light is incident on aglass prism, it undergoes dispersion. This phenomenon is due to _____.

Ans ✗ 1. refractive index of the glass being the same for different colours

✔ 2. refractive index of the glass being different for different colours

✗ 3. diffraction of the light

✗ 4. interference of the light

Q.26 If $a : b = 3 : 2$ and $b : c = 4 : 5$, th en $a : b : c = $?

Ans ✗ 1. $3 : 4 : 5$

✗ 2. $6 : 5 : 4$

✔ 3. $6 : 4 : 5$

✗ 4. $4 : 5 : 3$

Q.27 Evaluate the given expression.

$(-4) + (-12) \div (-6)$

Ans ✗ 1. -6

✗ 2. -4

✗ 3. -8

✔ 4. -2

Q.28 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

EGI, KMO, QSU, WYA,?

Ans ✗ 1. CFI

✗ 2. DFH

✗ 3. DGJ

✔ 4. CEG

Q.29 The nature of an image formed by a concave mirror when an object is kept at the position between the principal focus and the pole of the mirror is _____.

Ans ✗ 1. virtual and inverted

✗ 2. real and erect

✗ 3. real and inverted

✓ 4. virtual and erect

Q.30 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. DK-HO

✓ 2. AD-GJ

✗ 3. QX-UB

✗ 4. RY-VC

Q.31 Given below is a statement followed by two possible reasons numbered I and II. Read the statement carefully and decide which of the two explain(s) the event/observation/information given in the statement.

Statement – Price of tomatoes has been steadily rising in the last two weeks and has crossed ₹200 per kg in most parts of the country.

Reasons:

(I) Farmers have reported a new unknown insect infestation in tomato crops, which has affected the crop output of tomatoes in many states across the country.

(II) Heavy flooding in many states during the monsoon season has destroyed many standing vegetable crops, leading to shortages in supplies.

Ans ✗ 1. Only I is a possible reason.

✗ 2. Only II is a possible reason.

✗ 3. Neither I nor II is a possible reason.

✓ 4. Both I and II are possible reasons.

Q.32 If each vowel in the word ELASTIC is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order, then which of the following letters will be fourth from the right in the group of letter thus formed?

Ans ✗ 1. B

✗ 2. U

✗ 3. M

✓ 4. T

Q.33 What organisation is hosting the six-day international festival on Indian dance from 16 October 2024 in Delhi?

Ans ✗ 1. Kathak Kendra

  ✗ 2. Kalakshetra Foundation

  ✗ 3. Indian Council for Cultural Relations

  ✓ 4. Sangeet Natak Akademi

Q.34 The weights (in kg) of 9 members of a school cricket team are 50, 63, x, 62, 64, 48, 51, 55, 48. If the mean weight is 56 kg, then the value of x is _____.

Ans ✗ 1. 57

  ✓ 2. 63

  ✗ 3. 48

  ✗ 4. 64

Q.35 In September 2024, Prime Minister Narendra Modi launched three _____ supercomputers, developed indigenously under the National Supercomputing Mission.

Ans ✗ 1. PARAM Shakti

  ✗ 2. Parma Chandra

  ✓ 3. PARAM Rudra

  ✗ 4. PARAM Surya

Q.36 The HCF of the numbers 310, 208 and 180 is:

Ans ✗ 1. 4

  ✗ 2. 6

  ✗ 3. 8

  ✓ 4. 2

Q.37 Which of the following household items does NOT use the heating effect of current?

Ans ✗ 1. Electric stove (heater)

  ✓ 2. Electric motor

  ✗ 3. Electric iron box

  ✗ 4. Electric water heater

Q.38 The simple interest on ₹1,280 at 5% p.a. in 3 years is:

Ans
✗ 1. ₹185

✗ 2. ₹180

✗ 3. ₹195

✓ 4. ₹192

Q.39 Who among the following won the Gold Medal in 2020 Paralympics and Silver in 2024 Paralympics in Shooting?

Ans
✗ 1. Rubina Francis

✗ 2. Nishad Kuamr

✓ 3. Manish Narwal

✗ 4. Pramod Bhagat

Q.40 What is the title of Parimal Nathwani's book, which was presented to PM Modi in 2024?

Ans
✓ 1. Call of the Gir

✗ 2. The Kingdom of Lions

✗ 3. Asiatic Lions: A Conservation Story

✗ 4. The Pride of Gujarat

Q.41 Which of the following options does NOT represent a property of solids?

Ans
✗ 1. They have a tendency to maintain their shape when subjected to outside force.

✗ 2. They have a definite shape.

✗ 3. They have distinct boundaries and fixed volumes.

✓ 4. It is not difficult to change their shape.

Q.42 Sharad starts from Point Y and drives 9 km towards the South. He then takes a left turn, drives 19 km, turns right and drives 23 km. He then takes a right turn and drives 8 km. He takes a right turn and drives 17 km. He then turns left, drives 11 km, turns left and drives 6 km to stop at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)

Ans
✗ 1. 23 km towards the south

✗ 2. 15 km towards the south

✓ 3. 21 km towards the north

✗ 4. 26 km towards the north

Q.43 In a certain code language, 'RUIN' is coded as '3719' and 'RUNG' is coded as '7916'. What is the code for 'G' in the given code language?

Ans ✗ 1. 7

✓ 2. 6

✗ 3. 1

✗ 4. 9

Q.44 Find the perimeter of a rhombus whose diagonals are of lengths 6 cm and 8 cm.

Ans ✓ 1. 20 *cm*

✗ 2. 26 *cm*

✗ 3. 25 *cm*

✗ 4. 24 *cm*

Q.45 Which Kashmiri wood carver was honoured with the Padma Shri award in 2024 for his contributions in the field of art?

Ans ✗ 1. Mohammad Yousuf

✗ 2. Bashir Ahmad Mir

✓ 3. Shri Ghulam Nabi Dar

✗ 4. Abdul Rashid Khan

Q.46 In a certain code language, 'bright as day' is coded as 'cb mn ju' and 'day and night' is coded as 'mn fd rs'. How is 'day' coded in the given language?

Ans ✓ 1. mn

✗ 2. fd

✗ 3. ju

✗ 4. cb

Q.47 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some cars are bikes.

All bikes are trucks.

Conclusions:

(I) Some trucks are cars.

(II) All trucks are cars.

Ans ✗ 1. Both conclusions (I) and (II) follow

✗ 2. Only conclusion (II) follows

✗ 3. Neither conclusion (I) nor (II) follows

✔ 4. Only conclusion (I) follows

Q.48 The magnetic field produced by a current-carrying wire at a given point depends on which of the following factors?

Ans ✗ 1. Current flowing through the wire Only

✗ 2. Distance from the wire Only

✔ 3. Both distance from the wire and current through the wire

✗ 4. Neither distance from the wire nor current through the wire

---

Q.49 Which two numbers should be interchanged to make the given equation correct?

$75 \div 5 + 15 \times 4 - 17 \times 3 + (60 \div 6) \times 10 = 100$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)

Ans ✗ 1. 3 and 6

✗ 2. 3 and 4

✗ 3. 17 and 15

✔ 4. 5 and 3

Q.50 Simplify the following expression:

9991×10009

Ans ✗ 1. 9999999

✔ 2. 99999919

✗ 3. 9999919

✗ 4. 91999919

Q.51 Which element is needed by the thyroid gland to produce thyroxine hormone?

Ans

✗ 1. Iodine

✗ 2. Sodium

✓ 3. Potassium

✗ 4. Calcium

Q.52 TRPMK is related to XVTQO in a certain way based on the English alphabetical order. In the same way, LJHEC is related to PNLIG. To which of the following options is KIGDB related, following the same logic?

Ans

✗ 1. OMKIF

✗ 2. NLJGE

✗ 3. OMKIG

✓ 4. OMKHF

Q.53 RGEL is related to VKAH in a certain way based on the English alphabetical order. In the same way, HWOV is related to LAKR. To which of the following options is TICJ related, following the same logic?

Ans

✗ 1. XNYF

✗ 2. XNYG

✓ 3. XMYF

✗ 4. XMZF

Q.54 Amit bought a laptop at a 25% discount on its marked price. If he paid ₹28,500 for the laptop, what was its marked price?

Ans

✗ 1. ₹37,400

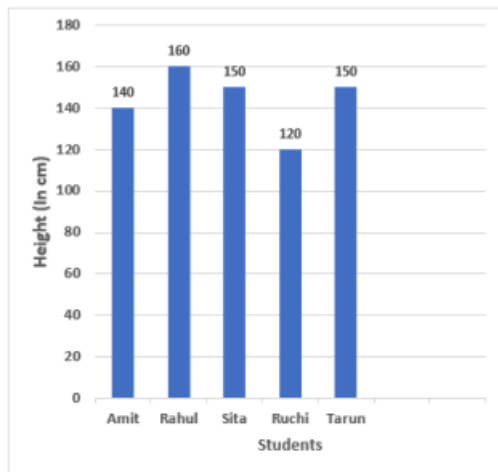✗ 2. ₹37,000

✓ 3. ₹38,000

✗ 4. ₹38,600

Q.55 Ms. Yanung Jamoh Lego, who has been conferred with Padma Shri award in the field of Agriculture in 2024, belongs to which state of India?

Ans

✗ 1. Maharashtra

✗ 2. Madhya Pradesh

✗ 3. Rajasthan

✓ 4. Arunachal Pradesh

Q.56 Study the following graph and answer the given question.

The graph shows the height of five students in a class.

What is the respective ratio between the height of Amit and height of Rahul?

Ans ✗ 1. 5 : 6

✗ 2. 9 : 10

✔ 3. 7 : 8

✗ 4. 12 : 13

Q.57 The Defence Research and Development Organisation's headquarters is located in

_____.

Ans ✗ 1. Hyderabad

✔ 2. New Delhi

✗ 3. Mumbai

✗ 4. Bengaluru

Q.58 Which of the following is NOT an example of osmosis?

Ans ✗ 1. Swelling of raisins when soaked in water

✗ 2. Movement of O_2 and CO_2 in and out of the living cell

✗ 3. Absorption of water by plant roots

✔ 4. Gaining of water by unicellular fresh water organisms

Q.59 Which of the following organisms does NOT show asexual reproduction by means of fission?

Ans ✗ 1. Amoeba

✗ 2. Plasmodium

✔ 3. Earthworm

✗ 4. Leishmania

Q.60 By how much is 80% of 40 greater than $\frac{4}{5}$ of 25?

Ans ✗ 1. 9

✗ 2. 6

✗ 3. 4

✓ 4. 12

Q.61 In a certain code language,

A + B means 'A is the mother of B',

A − B means 'A is the brother of B',

A × B means 'A is the wife of B',

A ÷ B means 'A is the father of B',

and A # B means 'A is the daughter of B'.

How is P related to K if 'Q − R × P ÷ S − T + K'?

Ans ✗ 1. Son's daughter

✗ 2. Daughter's son

✓ 3. Mother's father

✗ 4. Father's father

Q.62 Who among the following is currently the Governor of the Reserve Bank of India (RBI) as of 2024?

Ans ✓ 1. Shaktikanta Das

✗ 2. Raghuram Rajan

✗ 3. Duvvuri Subbarao

✗ 4. Urjit Patel

Q.63 The sum of a two-digit number and the number obtained by reversing the digits is 99. If the digits of the number differ by 7, then the two-digit number can be:

Ans ✗ 1. 92

✓ 2. 81

✗ 3. 19

✗ 4. 29

Q.64 8 men and 12 women can build a wall in 10 days. 6 men and 8 women can build the same wall in 14 days. How long will take for 2 women and 1 man to build it together?

Ans ✗ 1. 280 days

✗ 2. 35 days

✗ 3. 140 days

✓ 4. 70 days

Q.65 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. PL-OR

✗ 2. LH-KN

✗ 3. NJ-MP

✓ 4. SO-RV

Q.66 A solution contains 40 g of common salt in 320 g of water. What is the concentration of the solution in terms of mass by mass percentage?

Ans ✗ 1. 11.0%

✓ 2. 11.1%

✗ 3. 11.3%

✗ 4. 1.0%

Q.67 If + means −, − means ×, × means ÷, ÷ means +, then what will come in place of the question mark (?) in the following equation?

$28 - 6 \div 4 + 14 \times 14 = ?$

Ans ✗ 1. 160

✗ 2. 169

✓ 3. 171

✗ 4. 168

Q.68 Which of the following is formed when carbon dioxide reacts with calcium hydroxide?

Ans ✗ 1. Carbon monoxide

✓ 2. Calcium carbonate

✗ 3. Calcium oxide

✗ 4. Methane

Q.69 Which of the following statements is correct according to the law of conservation of mass?

Ans ✗ 1. Mass can be created in a chemical reaction.

✗ 2. Mass can be created but cannot be destroyed in a chemical reaction.

✔ 3. Mass can neither be created nor be destroyed in a chemical reaction.

✗ 4. Mass can be destroyed in a chemical reaction.

Q.70 The number of chromosomes become half in a daughter cell by the process of:

Ans ✗ 1. binary fission

✔ 2. meiosis

✗ 3. amitosis

✗ 4. mitosis

Q.71 Each letter in the word HYDROMETER is changed to the letter preceding it in the English alphabetical order and then all the letters thus formed are arranged in alphabetical order. Which of the following letters will be fifth from the right in the new group of letters thus formed?

Ans ✗ 1. L

✔ 2. N

✗ 3. Q

✗ 4. G

Q.72 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 649 :: 956 : Y

Ans ✔ 1. X = 894, Y = 711

✗ 2. X = 944, Y = 742

✗ 3. X = 923, Y = 738

✗ 4. X = 876, Y = 724

Q.73 A, B, E, F, L, M and P are sitting around a circular table, facing the centre. Only three people sit between P and E when counted from the left of P. Only three people sit between M and A when counted from the right of A. L sits to the immediate right of M. F is an immediate neighbour of A as well as E. Who sits second to the left of B?

Ans ✔ 1. F

✗ 2. A

✗ 3. P

✗ 4. E

Q.74 Select the number from among the given options that can replace the question mark (?) in the following series.

175 221 267 313 359 ?

Ans ✗ 1. 429

✗ 2. 431

✔ 3. 405

✗ 4. 413

Q.75 Which of the following compounds is unsaturated?

Ans ✗ 1. C_4H_{10}

✗ 2. C_3H_8

✗ 3. C_2H^6

✔ 4. C_2H_4

2024/12/03-04:21:20

Test Date	29/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

* Note
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 A can do a certain work in the same time in which B and C together can do it. If A and B together could do it in 10 days and C alone in 50 days, then B alone could do it in:

Ans ✗ 1. 20 days

✗ 2. 30 days

✗ 3. 15 days

✓ 4. 25 days

Q.2 The force of attraction between two bodies which is directly proportional to the product of masses of the bodies and inversely proportional to the square of the distance of separation is _____.

Ans ✓ 1. gravitational force

✗ 2. electromagnetic force

✗ 3. electromotive force

✗ 4. electrostatic force

Q.3 In a certain code language,

A + B means 'A is the mother of B',

A − B means 'A is the brother of B',

A × B means 'A is the wife of B' and

A ÷ B means 'A is the father of B'.

Based on the above, how is Q related to T if 'P × Q ÷ R − S + T'?

Ans ✓ 1. Mother's Father

✗ 2. Brother

✗ 3. Husband

✗ 4. Mother's brother

Q.4 In a certain code language, 'MEND' is coded as '3186' and 'MINE' is coded as '1623'. What is the code for 'I' in the given code language?

Ans ✗ 1. 6

✗ 2. 3

✗ 3. 1

✓ 4. 2

Q.5 Which indigenously developed technology was used in the AKASH-NG missile during its flight test in 2024?

Ans ✗ 1. Electro-optical Seeker

✗ 2. Infrared Seeker

✗ 3. Laser-guided Seeker

✓ 4. Radio Frequency Seeker

Q.6 Different cell organelles such as mitochondria, ribosome, etc., together constitute the basic unit of life called the:

Ans ✗ 1. tissue

✗ 2. organ

✓ 3. cell

✗ 4. organ system

Q.7 In a certain code language, 'cafe hotel room' is coded as 'aa bb ee', 'room kitchen hall' is coded as 'ff aa bb', and 'hall hotel garden' is coded as 'ee ff tt'. What is the code for 'garden' in the given code language?

Ans ✓ 1. tt

✗ 2. bb

✗ 3. ff

✗ 4. ee

Q.8 Malarial parasite shows which type of asexual reproduction?

Ans ✗ 1. Budding

✓ 2. Multiple fission

✗ 3. Regeneration

✗ 4. Binary fission

Q.9 Which of the following options does NOT represent a property of liquids?

Ans ✓ 1. Liquids do not have fixed volume.

✗ 2. Liquids have no fixed shape.

✗ 3. Liquids take the shape of the container in which they are kept.

✗ 4. Liquids flow and change shape.

Q.10 Which of the following has the lowest pH value?

Ans ✔ 1. Gastric juice

✘ 2. Lemon juice

✘ 3. Milk of magnesia

✘ 4. Blood

Q.11 If the mean of a distribution is 8.73 and its median is 11, then the mode of the distribution is _____ (using empirical relation).

Ans ✘ 1. 19.73

✘ 2. 22

✘ 3. 17.46

✔ 4. 15.54

Q.12 How long will it take for ₹1,500 to become ₹2,040 at a rate of 8% per annum simple interest?

Ans ✘ 1. 2 years

✔ 2. $4\frac{1}{2}$ years

✘ 3. $4\frac{3}{4}$ years

✘ 4. 3 years

Q.13 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All water is milk.

No milk is oil.

Conclusions:

(I) Some milk is water.

(II) No oil is water.

Ans ✗ 1. Only conclusion (I) follows.

✔ 2. Both conclusions (I) and (II) follow.

✗ 3. Neither conclusion (I) nor (II) follows.

✗ 4. Only conclusion (II) follows.

Q.14 Two trains travelling in the same direction at 40 km/h and 22 km/h cross each other completely in 1 minute. If the length of the first train is 125 m, what is the length of the second train?

Ans ✔ 1. 175 m

✗ 2. 185 m

✗ 3. 125 m

✗ 4. 150 m

Q.15 The work done by a 10 Newton force acting on a body, which results in the displacement of 2 m in the direction of the force, is _____.

Ans ✔ 1. 20 joules

✗ 2. 0

✗ 3. 10 joules

✗ 4. 0.2 joule

Q.16 Ariel ranked 6th from the top and 18th from the bottom in her class. How many students are there in the class?

Ans ✗ 1. 26

✔ 2. 23

✗ 3. 25

✗ 4. 22

Q.17 What can be formed by a coil of many circular turns of insulated copper wire wrapped closely in the shape of a cylinder?

Ans ✗ 1. Toroid

✔ 2. Solenoid

✗ 3. Straight conductor

✗ 4. Circular coil

Q.18 A fruit seller had some apples. He sells 40% of those apples and still has 240 apples. How many apples did he originally have?

Ans ✔ 1. 400

✗ 2. 372

✗ 3. 600

✗ 4. 588

Q.19 Evaluate the given expression.

$19 - 20 \div 4$

Ans ✗ 1. -1

✔ 2. 14

✗ 3. 19

✗ 4. 24

Q.20 On 9 November 2023, N Srikant was appointed as the Additional Secretary in the Union Ministry of _____.

Ans ✗ 1. Environment and Forests

✗ 2. Housing and Urban Affairs

✔ 3. Power and New and Renewable Energy

✗ 4. Finance

Q.21 The following substances are stored in the vacuole of plant cells, EXCEPT:

Ans ✔ 1. sugars

✗ 2. proteins

✗ 3. mineral salts

✗ 4. amino acids

Q.22 Select the option that shows the correct age range of puberty in human male and female.

Ans   ✗ 1. 6-10 years

  ✔ 2. 11-17 years

  ✗ 3. 8-11 years

  ✗ 4. 9-12 years

Q.23 The volume of a wall that is 5 times as high as it is broad and 8 times as long as it is high is 12.8 cubic meters. Find the breadth of the wall.

Ans   ✗ 1. 0.04 meter

  ✗ 2. 0.004 meter

  ✔ 3. 40 cm

  ✗ 4. 400 cm

Q.24 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 676 :: 17 : Y

Ans   ✔ 1. X = 25, Y = 324

  ✗ 2. X = 21, Y = 396

  ✗ 3. X = 28, Y = 361

  ✗ 4. X = 23, Y = 400

Q.25 In an election between two candidates, 75% of the voters cast their votes. 2% of the votes cast were declared invalid. A candidate got 9261 votes which were 75% of the total valid votes. The total number of voters enrolled in that election was:

Ans   ✗ 1. 18,000

  ✔ 2. 16,800

  ✗ 3. 10,000

  ✗ 4. 16,400

Q.26 In 2024, which of the following Indian banks launched the Green Rupee Term Deposit?

Ans ✗ 1. ICICI Bank

✗ 2. Central Bank of India

✔ 3. State Bank of India

✗ 4. HDFC Bank

Q.27 Which of the following is NOT a characteristic feature of epithelial tissue?

Ans ✔ 1. Separated from the underlying tissue by a cellular, non-fibrous basement membrane

✗ 2. Covers most organs and cavities within the body

✗ 3. Have no intercellular spaces

✗ 4. Are tightly packed

Q.28 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans ✗ 1. FK-IN

✗ 2. DI-GL

✔ 3. LP-NR

✗ 4. QV-TY

Q.29 Which rapper, known for the indie album 'Halaat', has risen from the slums of Dharavi to the forefront of Indian hip hop music?

Ans ✗ 1. Emiway Bantai

✗ 2. Naezy

✔ 3. MC Altaf

✗ 4. Divine

Q.30 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some vegetables are fruits.

Some fruits are sweets.

Conclusions:

(I) Some fruits are vegetables.

(II) Some sweets are vegetables.

Ans   ✗ 1. Both conclusions (I) and (II) follow.

✗ 2. Neither conclusion (I) nor (II) follows.

✔ 3. Only conclusion (I) follows.

✗ 4. Only conclusion (II) follows.

Q.31 The oxygen molecule is a _____.

Ans   ✗ 1. monoatomic molecule

✔ 2. diatomic molecule

✗ 3. triatomic molecule

✗ 4. tetratomic molecule

Q.32 An amount is divided between two friends in the ratio 4 : 7. If the second part is ₹6 more than the first, then the difference in amount between two friends is:

Ans   ✗ 1. ₹4

✗ 2. ₹2

✔ 3. ₹6

✗ 4. ₹3

Q.33 Each vowel in the word JOURNALIST is changed to the letter following it in the English alphabetical order, and each consonant is changed to the letter preceding it in the English alphabetical order. How many letters will appear exactly twice in the group of letters thus formed?

Ans   ✗ 1. Three

✔ 2. None

✗ 3. Two

✗ 4. One

Q.34 The line joining the centre of curvature and the pole of a given spherical mirror is called _____.

Ans
✗ 1. radius of curvature

✗ 2. principal focus

✗ 3. focal length

✔ 4. principal axis

Q.35 If each consonant in the word GRAVITY is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order. How many consonants are present in the new group of letters thus formed?

Ans
✔ 1. Six

✗ 2. Three

✗ 3. Seven

✗ 4. Two

Q.36 In 2024, the Ministry of Women and Child Development launched the platform _____ to register and monitor complaints of sexual harassment of women at the workplace.

Ans
✗ 1. WomenSafe

✔ 2. SHe-Box

✗ 3. Work Guard

✗ 4. Secure Her

Q.37 Which of the following is NOT an example of combination reaction?

Ans
✔ 1. Silver chloride turns grey in sunlight

✗ 2. Formation of water from $H_2(g)$ and $O_2(g)$

✗ 3. Calcium oxide reacts vigorously with water to produce slaked lime

✗ 4. Burning of natural gas

Q.38 Simplify the expression: $\sqrt{\dfrac{1+\cos\theta}{1-\cos\theta}}$ is:

Ans
✗ 1. $\operatorname{cosec}\theta - \cot\theta$

✗ 2. $\sec\theta + \cot\theta$

✔ 3. $\operatorname{cosec}\theta + \cot\theta$

✗ 4. $\sec\theta - \cot\theta$

Q.39 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BJL, EMO, HPR, KSU, ?

Ans　✗ 1. NUY

　　　✗ 2. NVY

　　　✗ 3. NUW

　　　✔ 4. NVX

Q.40 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans　✗ 1. SV-MP

　　　✗ 2. AD-UX

　　　✔ 3. TX-RV

　　　✗ 4. FI-ZC

Q.41 Study the given table and answer the question that follows.

The table depicts the number of different articles X and Y sold in the year 2019 and 2020.

Years	Number of article X	Number of article Y
2019	125	150
2020	110	130

What is the absolute difference between the number of article X sold in the year 2019 and 2020?

Ans　✗ 1. 45

　　　✗ 2. 25

　　　✗ 3. 35

　　　✔ 4. 15

Q.42 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

125, 128, 133, 140, 149,?

Ans　✗ 1. 154

　　　✗ 2. 158

　　　✔ 3. 160

　　　✗ 4. 156

Q.43 Which of the following missions will lead to India's first human presence on the International Space Station (ISS)?

Ans ✔ 1. Axiom-4

✘ 2. Taxsci-4

✘ 3. Spacoon-4

✘ 4. VenSpac-4

Q.44 Which of the following is the correct statement about colloidal solutions?

Ans ✘ 1. The size of particles of the colloid is not too small.

✔ 2. The components of a colloidal solution are the dispersed phase and the dispersion medium.

✘ 3. Colloids do not scatter a beam of light passing through them and make its path visible.

✘ 4. A colloidal solution is a homogeneous mixture.

Q.45 The corresponding sides of two similar triangles are in the ratio of 2: 3. If the area of the smaller triangle is 36 sq cm, then the area of the bigger triangle is:

Ans ✘ 1. 36 sq cm

✘ 2. 96 sq cm

✔ 3. 81 sq cm

✘ 4. 16 sq cm

Q.46 A, B, C, D, E and F are sitting around a circular table facing the centre. C sits to the immediate left of E. F is an immediate neighbour of A and C. D is not an immediate neighbour of E. What is the position of D with respect to F?

Ans ✘ 1. Third to the left

✔ 2. Second to the left

✘ 3. Third to the right

✘ 4. Immediate left

Q.47 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

FB-IE-LM

JF-MI-PQ

Ans ✘ 1. NI-QN-TU

✔ 2. LH-OK-RS

✘ 3. HD-KG-NP

✘ 4. KG-NJ-QS

Q.48 Which two numbers should be interchanged to make the given equation correct?

$3 \times (9 + 7 - 5) + (64 \div 2) - 22 + 78 - 8 \times 4 = 82$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)

Ans ✗ 1. 3 and 4

✔ 2. 64 and 78

✗ 3. 7 and 5

✗ 4. 2 and 4

Q.49 QLPK is related to IDHC in a certain way based on the English alphabetical order. In the same way, VQUP is related to NIMH. To which of the following options is TOSN related, following the same logic?

Ans ✗ 1. GLKF

✔ 2. LGKF

✗ 3. GLFK

✗ 4. LGFK

Q.50 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 - Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 803 :: 469 : Y

Ans ✔ 1. X = 545, Y = 727

✗ 2. X = 558, Y = 712

✗ 3. X = 512, Y = 792

✗ 4. X = 526, Y = 758

Q.51 Which of the following molecules has triple bond between the two atoms?

Ans ✗ 1. Cl_2

✔ 2. N_2

✗ 3. O_2

✗ 4. F_2

Q.52 Simplify the following expression:

9992×10008

Ans ✔ 1. 99999936

✗ 2. 9999936

✗ 3. 9999964

✗ 4. 91999964

Q.53 Find the mean marks of the following distribution.

Marks obtained	No. of students
25	5
30	6
35	3
40	1

Ans ✗ 1. 29

✔ 2. 30

✗ 3. 32

✗ 4. 31

Q.54 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Long queues are seen outside the electricity bill payment counters on 14th and 15th of each month, as 15th of each month is the last date for payment of electricity bills. Citizens have lodged several complaints with the electricity board regarding this difficulty in payment.

Courses of Action:

(I) The electricity board should set up additional counters for payment collection on 14th and 15th of each month, to make it easier for citizens.

(II) The electricity board should increase the penalty to be paid after the specified last date.

Ans ✗ 1. Both I and II follow

✗ 2. Only II follows

✔ 3. Only I follows

✗ 4. Neither I nor II follows

Q.55 If $x : y = 8 : 3,$ then $(x - y) : (x + y) = $?

Ans ✗ 1. $11 : 5$

✗ 2. $2 : 5$

✗ 3. $5 : 2$

✔ 4. $5 : 11$

Q.56 Select the correct statement.

Ans ✗ 1. Pollination is germination of pollen grains.

✗ 2. Pollination is the growth of pollen tube in ovule.

✗ 3. Pollination is visit of insects to the flower.

✔ 4. Pollination is transfer of pollen grains from stamen to stigma.

Q.57 The 63ʳᵈ National Open Athletics Championship was conducted in the city of

_____.

Ans ✗ 1. Bhopal

✗ 2. Hyderabad

✔ 3. Bengaluru

✗ 4. Mumbai

Q.58 In the 2024 Union Budget, the government allocated funds for the development of the Vishnupad Temple Corridor. In which of the following states is the Vishnupad Temple located?

Ans ✗ 1. Uttar Pradesh

✗ 2. Tamil Nadu

✔ 3. Bihar

✗ 4. West Bengal

Q.59 Uniform circular motion is described by which of the following examples?

Ans ✗ 1. A car moving on a straight road

✔ 2. motion of clock hands

✗ 3. A monkey jumping from one tree to another

✗ 4. A rain drop falling from the sky

Q.60 If the radius of a sphere is increased by 2 cm, then its surface area increases by 704 cm². Using $\pi = \frac{22}{7}$, find the radius of the sphere after the increase.

Ans ✗ 1. 16 cm

✗ 2. 13 cm

✗ 3. 14 cm

✔ 4. 15 cm

Q.61 The resistance of a conductor of length 'L' and cross-section area 'A' is directly proportional to _____.

Ans ✗ 1. L²

✔ 2. L/A

✗ 3. A/L

✗ 4. A

Q.62 Arnab buys 9 oranges and 8 bananas for ₹276. When the cost of an orange is decreased by 10% and that of a banana remains the same, then the cost of 5 oranges and 10 bananas is ₹210. What is the original cost of 4 oranges and 3 bananas?

Ans ✗ 1. ₹108

✗ 2. ₹120

✗ 3. ₹123

✔ 4. ₹116

Q.63 For what value of K is the equation $\frac{0.009}{K} = 0.1$ true?

Ans ✗ 1. 0.9

✗ 2. 0.0009

✔ 3. 0.09

✗ 4. 9

Q.64 If 'I' stands for '+', 'J' stands for '×', 'K' stands for '÷' and 'L' stands for '−' what will come in place of the question mark '?' in the following equation?

(35 L 19) J 4 I 26 L (7 J 3) I 11 = ?

Ans ✔ 1. 80

✗ 2. 105

✗ 3. 60

✗ 4. 120

Q.65 According to the reactivity series, iron is more reactive than _____.

Ans ✗ 1. sodium

✔ 2. copper

✗ 3. potassium

✗ 4. calcium

Q.66 Johny starts from Point A and drives 6 km towards the North. He then takes a right turn, drives 17 km, turns right and drives 13 km. He then takes a right turn and drives 8 km. He takes a final right turn, drives 7 km and stops at Point P. How far (shortest distance) and towards which direction should he drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)

Ans ✔ 1. 9 km towards the West

✗ 2. 9 km towards the East

✗ 3. 10 km towards the East

✗ 4. 10 km towards the West

Q.67 By how much is 50% of 60 greater than 30% of 40?

Ans ✔ 1. 18

✘ 2. 20

✘ 3. 13

✘ 4. 15

Q.68 The book 'Coaching Beyond: My Days with the Indian Cricket Team' is authored by R Sridhar and the foreword is by _____.

Ans ✘ 1. Saurabh Ganguly

✔ 2. VVS Laxman

✘ 3. Sachin Tendulakar

✘ 4. Rahul Dravid

Q.69 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

YRM, PID, GZU, XQL,?

Ans ✔ 1. OHC

✘ 2. PHC

✘ 3. OGC

✘ 4. OHB

Q.70 In the word MAJESTIC, each consonant is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order. How many vowels are present in the new group of letters thus formed?

Ans ✘ 1. Two

✔ 2. One

✘ 3. None

✘ 4. Four

Q.71 Seven people, B, C, D, E, F, G, and K, are sitting in a straight line, facing north.

Only two people sit between D and G. Only E sits to the right of K. Only one person sits between G and K. C sits at some place to the right of B but at some place to the left of F.

Who sits third from the right end of the line?

Ans ✘ 1. G

✔ 2. F

✘ 3. B

✘ 4. C

Q.72 A reduction of 20% in the price of sugar enables a purchaser to obtain 2.5 kg more for ₹160. The original price per kg of sugar is:

Ans ✗ 1. ₹12

✗ 2. ₹20

✗ 3. ₹15

✔ 4. ₹16

Q.73 Two successive discounts of 25% and 10% on a deal are equivalent to a single discount of:

Ans ✗ 1. 35%

✔ 2. 32.5%

✗ 3. 34.5%

✗ 4. 32%

Q.74 According to the '2024 State of the Rhino' Report by the International Rhino Foundation (IRF), which species of rhino could be severely affected by climate change?

Ans ✗ 1. Javan Rhino

✔ 2. Black Rhino

✗ 3. Sumatran Rhino

✗ 4. Greater One-horned Rhino

Q.75 Power of a lens of focal length 'f' is directly proportional to _____.

Ans ✗ 1. $1/f^2$

✗ 2. f

✔ 3. $1/f$

✗ 4. f^2

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