

MAHARAJA RANJIT SINGH AFPI EXAM – 2022

*** ENGLISH ***

Direction (Q. No. 1 to 7) : In these questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

Q.1 Ironic

- (1) Sarcastic (2) Sympathetic
(3) Bitter (4) Sincere

Q.2 Enormity

- (1) Outrageous (2) Goodness
(3) Immensity (4) Heinous

Q.3 Nonplussed

- (1) Surprised (2) Concerned
(3) Troubled (4) Nervous

Q.4 Unabashed

- (1) Sheepish (2) Timid
(3) Unapologetic (4) Shameful

Q.5 Construe

- (1) Interpret (2) Suggest
(3) Intimate (4) Misunderstand

Q.6 Vociferous

- (1) Lucid (2) Vehement
(3) Timid (4) Silent

Q.7 Didactic

- (1) Inquisitive (2) Misleading
(3) Instructive (4) Erroneous

Directions (Q. No. 8 to 12) : Fill in the blanks with a word from amongst the choices given

Q.8 All my friends admire the _____ of military life.

- (1) friendship (2) rigidity
(3) camaraderie (4) regulations

Q.9 The Company's previous boss got fired because of _____ funds.

- (1) misconduct (2) embezzlement
(3) mischief (4) misbehavior

Q.10 It was an _____ climb up the mountain.

- (1) arduous (2) confusing
(3) demanding (4) hard

Q.11 The new regulations will be _____ for small businesses to cope with.

- (1) easy (2) baffling
(3) abstract (4) burdensome

Q.12. I was completely _____ after a workout.

- (1) exhausted (2) happy
(3) elated (4) cut off

Directions (Q. No. 13 to 16) : In these questions, out of the four alternatives, choose the one which can be substituted for the given words/sentences.

Q.13 An act of renouncing the throne.

- (1) Dethrone (2) Defeat
(3) Exile (4) Abdication

Q.14 A story, a picture, or a poem that can be interpreted to reveal a hidden meaning, typically a moral or political one.

- (1) Allegory (2) Sonnet
(3) Limerick (4) Elegy

Q.15 The arrangements of events or dates in the order of their occurrence.

- (1) Procedure (2) Listwise
(3) Chronology (4) Serially

Q.16 An imaginary ideal society free of poverty and suffering.

- (1) Civilization (2) Region
(3) Settlement (4) Utopia

Q.17 Find the correctly spelt out of the four alternatives.

- (1) Acomadation (2) Accomodation
(3) Accommodation (4) Accommodasion

Q.18 Find the correctly spelt out of the four alternatives.

- (1) Embarrassed (2) Embarassed
(3) Embarrased (4) Embarased

Directions (Q. No. 19 to 23) : Four alternatives are given for the idiom/phrase in italics in the sentence. Choose the one which best expresses the meaning of idiom/phrase.

Q.19 They don't talk about Harvard anymore; turns out he was *the black sheep* for the family.

- (1) sheep black in colour
(2) being a coward
(3) being a disgrace to the family
(4) being obstinate

Q.20 My pet dog is *down for the count* after swimming in the pool.

- (1) tired (2) playful
(3) lazy (4) excited

Q.21 I hope you *break a leg* at your interview tomorrow.

- (1) encourage someone

- (2) break one's leg
- (3) saying good luck to someone
- (4) give a push

Q.22 She asked me to have dinner with her, but I had a task on hand so I said, rain check.

- (1) cancel a plan
- (2) decide on a plan
- (3) postpone a plan
- (4) adhere to a plan

Q.23 Everyone took hours to decode the password but Ajay did it like a cakewalk.

- (1) simple task
- (2) fast work
- (3) good work
- (4) easy task

Directions (Q. No. 24 to 27) : In these questions, out of the four alternatives, choose the one which is opposite to the meaning of given word.

Q.24 Never

- (1) Frequently
- (2) Always
- (3) Often
- (4) Sometimes

Q.25 Gallant

- (1) Coward
- (2) Proud
- (3) Ungentlemanly
- (4) Silly

Q.26 Conscientious

- (1) Negligent
- (2) Observant
- (3) Mindful
- (4) Incapable

Q.27 Annoy

- (1) Irritate
- (2) Irk
- (3) Ruffle
- (4) Satisfy

Directions (Q. No. 28 to 29) : A part in the following sentence is underlined, which may or may not be correct, improve the sentence by choosing one of the options. If no improvement is possible choose the option accordingly.

Q.28 He waded through the rivulet to reach the other part of the forest.

- (1) into
- (2) from
- (3) no improvement
- (4) across

Q.29 The bird sat atop the oak tree.

- (1) on
- (2) from
- (3) no improvement
- (4) in

Directions (Q. No. 30 to 32) : Reorder P, Q, R, S to make meaningful sentences.

Q.30 Students

- | | |
|------------------|-----------------------------|
| P: must write | Q: in the end of the letter |
| R: to the editor | S: a few suggestions |
| (1) PSRQ | (2) QSPR |
| (3) QPRS | (4) PSQR |

Q.31 The Hornbill is

- P: Naga festivities
- Q: often displayed on the
- R: traditional tribal headgears
- S: worn during

- (1) QRSP
- (2) PQRS
- (3) PSRQ
- (4) RQPS

Q.32 Each one

- | | |
|----------------------|----------------|
| P: is a step towards | Q: eradication |
| R: of illiteracy | S: teach one |
| (1) PQRS | (2) SPQR |
| (3) SQPR | (4) RSPQ |

Directions (Q. No. 33 to 40) : In these questions, you have two brief passages with four question following each passage . Read the passage carefully and choose the best answer out of four alternatives.

PASSAGE – 1 : Another favorite combination with power food tickets is yoghurt and bananas. This makes for a perfect snack after a rough game of football. Exercising burns sugar and thus lowers glucose levels. Yoghurt is packed with proteins that help preserve muscle mass, and bananas are packed with carbohydrates that help in refueling energy and preventing muscle soreness. A quick and easy recipe with bananas is a banana smoothie topped with cool Yoghurt.

Q.33 What makes for a perfect snack?

- (1) Yoghurt
- (2) Banana and Yoghurt
- (3) Smoothie
- (4) Cool Yoghurt

Q.34 Exercising

- (1) Lowers blood levels
- (2) Burns sugar
- (3) Makes you pant for breath
- (4) Makes you hungry

Q.35 Yoghurt is a good source of

- (1) Carbohydrates
- (2) Glucose
- (3) Proteins
- (4) Minerals

Q.36 Bananas help in

- (1) Replenishing the energy
- (2) Depleting energy
- (3) Developing muscle
- (4) Refueling energy

PASSAGE – 2 : A Chimpanzee is one of the great apes and the nearest in intelligence to man. Chimpanzee exhibits great concern for each other. When chimpanzees meet after having been apart they greet each other in a very human way by touching each other or even clasping hands. Chimpanzees have amazing social discipline. When a dominant male arrives, the rest of the chimpanzees hurry to pay respect to it. The members of a party also spend considerable amount of time grooming

each other and themselves. Mothers go through the fur of their babies for any foreign particles, dirt and ticks and they aid each other when they are injured

Q.37 A _____ is one of the great apes.

- (1) Orangutan (2) Gorillas
(3) Monkeys (4) Chimpanzee

Q.38 Chimpanzees have amazing

- (1) Social skills (2) Intelligence
(3) Social discipline (4) Grooming skills

Q.39 How are the baby chimps groomed?

- (1) The fathers go through the furs of the babies for any foreign particles or dirt.
(2) The mothers go through the furs of the babies for any foreign particles.
(3) The mothers go through the furs of the babies for any foreign particles, dirt or ticks.
(4) The fathers go through the furs of the babies for any foreign particles or dirt.

Q.40 Chimpanzees greet each other

- (1) folding hands
(2) joining hands
(3) waving to each other
(4) by touching each other or even clasping hands.

***** MATHEMATICS *****

Q.41 In a school, there are 1000 students in the year 1999 and the number of students increased by 20% in 2000. It further increased by 15% in the year 2001 and then decreased by 20% in 2002. The number of students in 2002 is:

- (1) 1004 (2) 1100
(3) 1104 (4) 1105

Q.42 The value of $\frac{(2.39)^2 - (1.61)^2}{2.39 - 1.61}$ is:

- (1) 2 (2) 4
(3) 6 (4) 8

Q.43 What decimal of an hour is a second?

- (1) 0.0025 (2) 0.00027
(3) 0.0256 (4) 0.000126

Q.44 Which of the following is a correct statement?

- (1) Every prime number is odd
(2) Every even number is composite
(3) The sum of two odd numbers is always odd
(4) The HCF of two numbers is a factor of their LCM

Q.45 The HCF of the smallest prime and the smallest composite number is:

- (1) 1 (2) 2
(3) 3 (4) 4

Q.46 If the eight-digit number 1965y785 is divisible by 15, the least value of 'y' is:

- (1) 2 (2) 4
(3) 6 (4) 1

Q.47 If one zero of polynomial $x^2 - 4x + 1$ is $2 - \sqrt{3}$, the other zero is:

- (1) $2 + \sqrt{3}$ (2) $2 - \sqrt{3}$
(3) $\sqrt{3} - 2$ (4) None of these

Q.48 If α and β are the zeroes of $f(x) = 2x^2 + 8x - 8$, then which of the following is true?

- (1) $\alpha + \beta + \alpha\beta = 0$ (2) $\alpha + \beta = \alpha\beta$
(3) $\alpha + \beta > \alpha\beta$ (4) $\alpha + \beta < \alpha\beta$

Q.49 The value of 'k' for which the pair of equations $2x + ky = 8$ and $3x + y = 6$ has no solution is:

- (1) -2 (2) 2
(3) $\frac{3}{2}$ (4) $\frac{2}{3}$

Q.50 The solution of $8^{x+y} = 512$ and $512^{x-y} = 8$ is:

- (1) $x = \frac{4}{3}, y = \frac{5}{3}$ (2) $x = \frac{5}{3}, y = \frac{4}{3}$
(3) $x = \frac{5}{3}, y = \frac{4}{3}$ (4) None of these

Q.51 Two friends Arun and Amit have a certain number of marbles each. Arun tells Amit "If you give me 10 of your marbles, I will have twice the number of marbles left with you." To this Amit replies "If you give me 10 of your marbles, I will have the same number of marbles as you will have." The number of marbles with Arun and Amit respectively are:

- (1) 20, 30 (2) 50, 70
(3) 70, 50 (4) 30, 20

Q.52 The difference between 42% of a number and 28% of the same number is 210. Then, 59% of the number is:

- (1) 700 (2) 775
(3) 785 (4) 885

Q.53 Instead of multiplying a number by 7, the number is divided by 7. The approximate percentage of error is:

- (1) 92% (2) 94%
(3) 96% (4) 98%

Q.54 The price of sugar increases by 20%. By what percentage should a lady reduce the consumption of sugar so that does not have to incur extra expenditure on it?

- (1) 15% (2) 20%
(3) 16.66% (4) 16.75%

Q.55 A sum of money is to be distributed among four friends A, B, C and D in the ratio 5 : 2 : 4 : 3. If C gets Rs. 1000 more than D, the B's share is:

- (1) Rs. 1000 (2) Rs. 2000
(3) Rs. 3000 (4) Rs. 5000

Q.56 If $\frac{7m+2n}{7m-2n} = \frac{5}{3}$, then $\frac{m}{n}$ is equal to:

- (1) $\frac{7}{8}$ (2) $-\frac{7}{8}$
(3) $\frac{8}{7}$ (4) $-\frac{8}{7}$

Q.57 If a mixture of 60 liters, the ratio of milk to water is 2 : 1. If this ratio is to be 1 : 2, then the quantity of water to be added is:

- (1) 20 liters (2) 30 liters
(3) 40 liters (4) 60 liters

Q.58 The sum and product of the zeroes of the polynomial $6x^2 - 5$ respectively are:

- (1) 0 and $-\frac{6}{5}$ (2) 0 and $\frac{6}{5}$
(3) 0 and $\frac{5}{6}$ (4) 0 and $-\frac{5}{6}$

Q.59 The sum of a two-digit number and the number obtained by reversing the order of the digits is 99. If the digits as of the number differ by 3, then the number is:

- (1) 63 (2) 85
(3) 72 (4) 52

Q.60 A shopkeeper sells a toy for Rs. 24 and gains as much percent as the cost price of the toy. The amount for which the shopkeeper bought the toy is:

- (1) Rs. 10 (2) Rs. 20
(3) Rs. 40 (4) Rs. 60

Q.61 The solution(s) of $\sqrt{6x+7} - (2x-7) = 0$ is/are:

- (1) $7, \frac{3}{2}$ (2) $3, \frac{7}{2}$
(3) $\frac{5}{2}, 4$ (4) $0, -\frac{1}{2}$

Q.62 Roots of the quadratic equation $25x^2 + 20x + 7 = 0$ are:

- (1) Real and equal (2) Real and distinct
(3) Real roots (4) Imaginary roots

Q.63 A and B can together complete a piece of work in 6 days. A takes 5 days less than B to complete the same work alone. The number of days B takes to complete the work alone is:

- (1) 6 (2) 9
(3) 12 (4) 15

Q.64 The sum of the squares of three consecutive integers is 110. Then, the smallest positive integer among them is:

- (1) 4 (2) 5
(3) 6 (4) 7

Q.65 If the points (p, 0), (0, q) and (1, 1) are collinear, and then $\frac{1}{p} + \frac{1}{q}$ equals:

- (1) 0 (2) -1
(3) 1 (4) 2

Q.66 OPQR is a rectangle such that O is the origin and the coordinates of P and Q are (0, 3) and (-5, 3) respectively. Then the length of its diagonal is:

- (1) 5 units (2) 3 units
(3) $\sqrt{34}$ units (4) $\sqrt{29}$ units

Q.67 The coordinates of the centre of a circle and one end of a diameter are $(\frac{4}{3}, -2)$ and (3, 2) respectively. The coordinates of the other end of the diameter are:

- (1) $(\frac{1}{3}, 6)$ (2) $(6, -\frac{1}{3})$
(3) $(-\frac{1}{3}, -6)$ (4) $(\frac{1}{3}, -6)$

Q.68 The point $(\frac{23}{5}, y)$ divides the line segment joining the points (5, 7) and (4, 5) in the ratio 2 : 3 internally. The 'y' is equal to:

- (1) $\frac{24}{5}$ (2) $\frac{31}{5}$
(3) $\frac{33}{5}$ (4) $\frac{27}{5}$

Q.69 The value of $\tan 1^\circ \tan 2^\circ \tan 3^\circ \dots \tan 89^\circ$ is:

- (1) 0 (2) 1
(3) -1 (4) $\frac{1}{\sqrt{2}}$

Q.70 If $\sin x + \operatorname{cosec} x = 2$, then $\sin^{15}x + \operatorname{cosec}^{16}x$ is equal to:

- (1) 2^{10} (2) 2^{20}
(3) 2^{30} (4) 2

Q.71 If A, B and C are the interior angles of a triangle, then $\cos\left(\frac{B+C}{2}\right)$ is equal to:

- (1) $\sin \frac{A}{2}$ (2) $\cos \frac{A}{2}$
(3) $-\sin \frac{A}{2}$ (4) $\tan \frac{A}{2}$

Q.72 At certain of the day, it is observed that the ratio of the lengths of the shadow of a pole to the length of the pole is $\sqrt{3} : 1$. The sun's altitude at this time is:

- (1) 30° (2) 45°
(3) 60° (4) 90°

Q.73 The angles of elevation of the top of a tower, from two points on the ground, at distance of 'x' m and 'y' m from its foot are complementary, then the height of the tower is:

- (1) xy meters (2) $x^2 y^2$ meters
(3) \sqrt{xy} meters (4) $\frac{x}{y}$ meters

Q.74 How many liters of oil at Rs. 40 per liters should be mixed with 240 liters of a second variety of oil costing Rs. 60 per liters so as to get a mixture whose cost is Rs. 52 per liters?

- (1) 110 liters (2) 120 liters
(3) 160 liters (4) 180 liters

Q.75 A man sold two chairs for Rs. 1200 each. On one he gained 20% and on the other he lost 20%. His total gain/loss on the whole deal is:

- (1) 1% loss (2) 2% loss
(3) 4% loss (4) 15% gain

Q.76 A dress marked at Rs. 2000 is sold with two successive discounts of 20% and 10% respectively. Also, an additional discount of 5% is given for payment by cash. If Meera pays for the dress by cash, the amount to be paid by her is:

- (1) Rs. 1368 (2) Rs. 1386
(3) Rs. 1468 (4) Rs. 1668

Q.77 If the radius of a circle is 7 cm, the perimeter of the semicircle is:

- (1) 7 cm (2) 14 cm
(3) 36 cm (4) 42 cm

Q.78 A wire is in the form of a circle of radius 7 cm. It is bent into a square. The area of the square is:

- (1) 11 cm² (2) 121 cm²
(3) 154 cm² (4) 169 cm²

Q.79 A hollow cube of edge 22 cm is filled with identical marbles of radii 0.25 cm. If one-eighth of the space in the cube remains unfilled, then the number of marbles in the cube is:

- (1) 142296 (2) 142396
(3) 142396 (4) 142596

Q.80 The volumes of two spheres are in the ratio 64 : 27, then the ratio of their surface areas is:

- (1) 3 : 4 (2) 4 : 3
(3) 9 : 16 (4) 16 : 9

Q.81 Find the area swept by the minute hand of a clock whose length is 12 cm between 11:15 a.m. and 11:50 a.m.

- (1) 260 cm² (2) 264 cm²
(3) 280 cm² (4) 284 cm²

Q.82 A cylinder, a cone and a hemi-sphere have the same height and radius. What is the ratio of their volumes (in the same order)?

- (1) 1 : 2 : 3 (2) 2 : 3 : 1
(3) 3 : 2 : 1 (4) 3 : 1 : 2

Q.83 When two dice are thrown, the probability of getting a sum of 7 on the dice is:

- (1) $\frac{1}{2}$ (2) $\frac{1}{5}$
(3) $\frac{1}{6}$ (4) $\frac{3}{4}$

Q.84 The probability of having 53 Wednesdays in a leap year is:

- (1) $\frac{1}{7}$ (2) $\frac{2}{7}$
(3) $\frac{3}{7}$ (4) 1

Q.85 The probability that two friends Asha and Kiran have their birthdays falling on the same date in a year is:

- (1) 0 (2) 1
(3) $\frac{1}{365}$ (4) $\left(\frac{1}{365}\right)^2$

Q.86 If the difference between the mode and the median of a given data is 36, then the difference between the median and the mean of the data is:

- (1) 12 (2) 16
(3) 18 (4) 20

Q.87 The value of 'x' for which the mode of the following data is 67 is:

Class Interval	40-50	50-60	60-70	70-80	80-90
Frequency	5	x	15	12	7

- (1) 7 (2) 8
(3) 9 (4) 10

Q.88 One card is drawn from a well-shuffled pack of 52 playing cards. The probability that the card drawn is not a face card is:

- (1) $\frac{2}{13}$ (2) $\frac{5}{13}$
(3) $\frac{3}{13}$ (4) $\frac{10}{13}$

Q.89 The perimeter of two similar triangles ABC and PQR, such that $\Delta ABC \sim \Delta PQR$, are 48 cm and 36 cm respectively. Then, the ratio of the areas of ΔABC and ΔPQR is:

- (1) 4 : 3 (2) 3 : 4
(3) 9 : 16 (4) 16 : 9

Q.90 Which term of the arithmetic progression 5, 15, 25, is 140 more than its 31st term?

- (1) 40 (2) 45
(3) 50 (4) 55

Q.91 The number of three-digit numbers divisible by 8 is:

- (1) 110 (2) 112
(3) 114 (4) 116

Q.92 If PA and PB are tangents drawn from an external point P to circle such that PA is 10 cm and $\angle APB = 60^\circ$. Then the length of the chord AB is:

- (1) 5 cm (2) 10 cm
(3) 15 cm (4) 20 cm

Q.93 Find the smallest number which when divided by 25, 40 and 60 leaves remainder 7 in each case.

- (1) 607 (2) 608
(3) 609 (4) 610

Q.94 ABCD is a quadrilateral circumscribing a circle with centre O. If $\angle AOD = 75^\circ$, measure of $\angle BOC$ is:

- (1) 75° (2) 85°
 (3) 95° (4) 105°

Q.95 From a point on the ground, Ravi observes that the angle of elevation of an aero plane flying at a constant height of $3000\sqrt{3}$ m is 60° . After 30 seconds, he observes that the angle of elevation has changed to 30° . At what speed is the aeroplane flying?

- (1) 100 m/s (2) 200 m/s
 (3) 3000 m/s (4) 1500 m/s

Q.96 In an agricultural field, a cylindrical pipe of diameter 14 cm is used to irrigate a rectangular patch of land whose dimensions are 50 m by 44 m. If the water flows through the pipe at the rate of 5 km/hr, how much time will it take to get 7 cm of standing water in the field?

- (1) 1 hr (2) 2 hrs
 (3) 3 hrs (4) 30 minutes

Q.97 The value of $\frac{\cos^3\theta + \sin^3\theta}{\cos\theta + \sin\theta} + \frac{\cos^3\theta - \sin^3\theta}{\cos\theta - \sin\theta}$ is:

- (1) 0 (2) 1
 (3) 2 (4) -1

Q.98 The mean of the first 'n' natural numbers is 15. Then 'n' is equal to:

- (1) 29 (2) 30
 (3) 31 (4) 32

Q.99 A toy is in the form of a hemisphere surmounted by a cone. The height of the conical part is 4 cm and its radius is 3 cm. Then, the total surface area of the toy is:

- (1) 15π (2) 18π
 (3) 32π (4) 33π

Q.100 AP and AQ are the tangents drawn from an external point A to a circle with centre O. At a point R on the minor arc PQ, a tangent is drawn so as to meet AP at C and AQ at B. If AP = 15 cm, the perimeter of the Δ ABC is:

- (1) 15 cm (2) 20 cm
 (3) 25 cm (4) 30 cm

Q.101 The number of polynomial that can be formed with -2 and 5 as its zeroes are:

- (1) 0 (2) 1
 (3) 2 (4) Infinite

Q.102 If one zero of the polynomial $(a^2 + 9)x^2 + 13x + 6a$ is the reciprocal of the other, the value of 'a' is:

- (1) 1 (2) 2
 (3) 3 (4) 4

Q.103 A fraction becomes $\frac{4}{5}$ when 1 is added to each of the numerator and denominator. If, however 5 is subtracted from each of them, the fraction becomes $\frac{1}{2}$. The numerator of the original fraction is:

- (1) 4 (2) 6
 (3) 7 (4) 9

Q.104 In the following table, the sum of the lower limits of the median class and the modal class is:

Class Interval	0-20	20-40	40-60	60-80	80-100
Frequency	8	10	13	6	3

- (1) 60 (2) 80
 (3) 100 (4) 140

Q.105 A milk vendor has 23 liters of goats' milk, 69 liters of buffaloes' milk and 92 liters of cows' milk. If he wants to pack them in cans so that each can contains same liters of milk and does not want to mix any two kinds of milk in a can, then the least number of cans required is:

- (1) 6 (2) 7
 (3) 8 (4) 9

Q.106 If the sum of the first 16 terms of an arithmetic progression is 1360 and first term is 10, then its 25th term is:

- (1) 240 (2) 250
 (3) 260 (4) 300

Q.107 Three circular pieces of cardboard, each of radius 3.5 cm, are placed on a table in such a way that each of them touches the other two. The approximately area of the table enclosed between these three circles is:

(Take $\sqrt{3} = 1.732$)

- (1) 1.94 cm^2 (2) 19.25 cm^2
 (3) 19.4 cm^2 (4) 21.19 cm^2

Q.108 The areas of two similar triangles are 121 cm^2 and 64 cm^2 , respectively. If the median of the first triangle is 12.1 cm, then the corresponding median of the second triangle is:

- (1) 8 (2) 11
 (3) 8.8 (4) 12.1

Q.109 In a parallelogram ABCD, points P and Q are on the sides AB and CD such that AP : PB = 3 : 2 and CQ : QD = 4 : 1. If PQ meets AC at R, AR : AC is equal to:

- (1) 3 : 7 (2) 4 : 7
 (3) 2 : 3 (4) 3 : 4

Q.110 If $(x + 1)$ & $(x - 2)$ are factors of $x^3 + (a + 1)x^2 - (b - 2)x - 6$, the values of a and b respectively are:

- (1) 1, 7 (2) -1, -7
 (3) 1, -7 (4) 7, -1

Q.111 A car covers a distance of 390 km with certain speed. If the speed had been 4 km/hr more, it would have taken 2 hours less to cover the same distance. The original speed of the car is:

- (1) 20 km/hr (2) 26 km/hr
 (3) 30 km/hr (4) 32 km/hr

Q.112 The cross section of a railway tunnel is in the shape of a square surmounted by a semicircle. If the height of the cross section at the centre is 10.5 m and the length of the tunnel is 50 m, the cost of plastering the internal surface of the tunnel at the rate of Rs. 10 per m² is:

- (1) Rs. 11000 (2) Rs. 11500
 (3) Rs. 12000 (4) Rs. 12500

Q.113 The reflection of the point (4, -7) about the origin is:

- (1) (4, 7) (2) (-4, 7)
 (3) (4, -7) (4) (-4, -7)

Q.114 The coordinates of the centroid of a triangle PQR are (2, -5). If the coordinates of Q and R are (-6, 5) and (11, 8) respectively, the coordinates of P are:

- (1) (7, 8) (2) (-1, 28)
 (3) (1, -28) (4) (-7, 8)

Q.115 Sindhi sweet shop was placing an order for cardboard boxes for packing their sweets. They decided to order 250 boxes each of the two different sizes. The larger box was to measure 25 cm × 20 cm × 5 cm and the smaller one, 15 cm × 12 cm × 5 cm. If, for all the overlaps, 5% of the total surface area is required and the cost of the cardboard is Rs. 40 per m², the total cost incurred by the sweet shop to procure the boxes:

- (1) Rs. 2000 (2) Rs. 2184
 (3) Rs. 2250 (4) Rs. 3000

Q.116 What is the common difference of four terms in an AP such that the ratio of the product of first and fourth term to that of the second and the third is 2 : 3 and the sum of all the four terms is 20?

- (1) 3 (2) 1
 (3) 4 (4) 2

Q.117 Find the area of a segment of a circle of radius 21 cm, if the angle made by the arc of the segment has a measure of 60°. (Take $\sqrt{3} = 1.732$)

- (1) 45.27 cm² (2) 41.6 cm²
 (3) 40.26 cm² (4) None of these

Q.118 If a & b are zeroes of polynomial $px^2 - 5x + q$, then the values of p and q, if $a + b = ab = 10$, are:

- (1) 5 and $\frac{1}{2}$ (2) 5 and 2
 (3) $\frac{1}{2}$ and 5 (4) 10 and 1

Q.119 The radius of the cycle wheel is 14 cm. The distance covered by the wheel in 50 rotations is:

- (1) 88 cm (2) 2200 cm
 (3) 440 cm (4) 4400 cm

Q.120 If the mean of x and $\frac{1}{x}$ is M, then the mean of x^3 and $\frac{1}{x^3}$ is:

- (1) $M = \frac{M^2 - 3}{2}$ (2) $M(4M^2 - 3)$
 (3) M^3 (4) $M^3 + 3$

*** SOCIAL STUDIES ***

Q.121 The custom of BEGAR in pre-independence era refers to:

- (1) Entire family working in the same field at the same time
 (2) Working in fields of landlords without any wages
 (3) Allowing use of wells turn by turn
 (4) Having a fix ratio of crops among different villages decided by sarpanchs

Q.122 Indians were agitating against the Rowlatt Act because:

- (1) Because it denied Indians' right to protest against the British government
 (2) It gave powers to detain political prisoners without trial for two years
 (3) It was enacted without representation of any Indian in British ruled India
 (4) Both (2) & (3)

Q.123 Fossil fuel is an example of:

- (1) Non-renewable resources
 (2) Biotic resource
 (3) Renewable resources
 (4) National resource

Q.124 Cereals and pulses grow well in:

- (1) Black soil (2) Laterite soil
 (3) Alluvial soil (4) Arid soil

Q.125 What percent of their deposits do banks hold as cash?

- (1) 50% (2) 15%
 (3) 80% (4) 35%

Q.126 Modern form of money includes:

- (1) Paper notes, coins and bank deposits
 (2) Dollars and Rupees
 (3) Paper notes, coins and gold bonds
 (4) Coins

Q.127 Which of the following is missing from a non-democratic government?

- (1) Economic equality (2) Economic growth
 (3) Transparency (4) Welfare of public

Q.128 The demand of Purna Swaraj (Complete independence) was formalised during which session of the Indian National Congress:

- (1) Belgaum session of 1924

- (2) Calcutta session of 1928
- (3) Lahore session of 1929
- (4) Karachi session of 1931

Q.129 The Salt March (Dandi March) marked the beginning of the:

- (1) Attack on traders of British goods
- (2) Boycott of civil services by Indians
- (3) Agitation of the farmers of the United Province
- (4) Civil disobedience movement

Q.130 The main cause of land degradation in Punjab is:

- (1) Intensive cultivation
- (2) Deforestation
- (3) Over grazing
- (4) Over irrigation

Q.131 The major coffee producing state in our country is:

- (1) Karnataka
- (2) Telangana
- (3) Gujarat
- (4) Maharashtra

Q.132 What do you understand by 'Collateral'.

- (1) It is guarantee given by the lender to the borrower
- (2) It is total sum of money with a person
- (3) It is security to the lender until the loan is repaid
- (4) It is the money a person receives through his provident fund

Q.133 In which of the following terms democracies differ from one another:

- (1) Social situation
- (2) Culture
- (3) Economic activities
- (4) All the above

Q.134 Medium of exchange is called as:

- (1) Wealth
- (2) GDP
- (3) Money
- (4) Income

Q.135 Who was the head of Oudh Kisan Sabha?

- (1) Ashfaqullah
- (2) Jawaharlal Nehru
- (3) Kunwar Singh
- (4) Bijli Passi

Q.136 was the female allegory which represented the people nation in France.

- (1) Marianne
- (2) Germania
- (3) Bharat Mata
- (4) Monalisa

Q.137 The purpose of Bhoodan was to:

- (1) To free landless farmers of the debt
- (2) Distribute land among landless farmers
- (3) To educate the farmers about the use of organic pesticides
- (4) To bring irrigation facilities to the fields in the arid land

Q.138 What is main source of income of banks?

- (1) Interest on loans
- (2) Selling of collaterals of loan defaulters
- (3) Interest earned on investments
- (4) Difference between interests charged on borrowers and depositors

Q.139 The process of rapid integration & interconnection between countries is called as:

- (1) Globalisation
- (2) Liberalisation
- (3) MNCs
- (4) Privatisation

Q.140 Which of the following is **NOT TRUE** with reference of democracy?

- (1) Democratic government is a legitimate government
- (2) Democratic government takes decisions very fast
- (3) Democratic government is accountable government
- (4) Decision making in democracies is based on norms and procedure

Q.141 The Act of Union between and resulted in formation of the United Kingdom of Great Britain

- (1) Russia and England
- (2) England and Prussia
- (3) England and Scotland
- (4) England and France

Q.142 Who played the key role in unifying Germany?

- (1) Kaiser William
- (2) Metternich
- (3) Adolph Hitler
- (4) Otto Von Bismarck

Q.143 Kandla and Ramagundam are in the states of and respectively.

- (1) Maharashtra – Gujarat
- (2) Gujarat – Telangana
- (3) Gujarat – Andhra Pradesh
- (4) Telangana – Gujarat

Q.144 Crops that are grown with the onset of monsoon are:

- (1) Kharif crops
- (2) Rabi crops
- (3) Zaid crops
- (4) Zaid and Rabi crops

Q.145 The main aim to form World Trade Organisation (WTO) was to:

- (1) To promote the trade of rich countries
- (2) To liberalise international trade
- (3) To promote the trade of poor countries
- (4) To promote the trade of poor countries

Q.146 Special Economic Zone (SEZs) has been set up to attract:

- (1) Foreign investments
- (2) Trade of foreign goods in international market
- (3) Foreign policies
- (4) Tourism industry

Q.147 Which of the following is **NOT A FEATURE** of federalism:

- (1) There are two or more levels of government
- (2) Different tier of government govern the same citizen
- (3) The central government can order the state government
- (4) Sources of revenue for each level of government are clearly specified

Q.148 Jacobin clubs were spreading the idea of

- (1) Awareness against epidemics
- (2) Inspiring the youth to join military service
- (3) Values of sports among the youth
- (4) Nationalism

Q.149 The main cause of farmer suicide in our country is

- (1) Their land is forcibly grabbed by the businessman of industrial activities

- (2) Village landlords are not permitting them to switch over from agriculture to any other occupation
- (3) They are unable to afford high prices of fertilizers, electricity and irrigation water
- (4) Their inability to repay loans due to crop failure

Q.150 Who remarked

When France sneezes, the rest of Europe catches cold

- (1) Napoleon
- (2) Metternich
- (3) Hitler
- (4) Winston Churchill

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