RRB NTPC CBT 2 (Level-5) Official Paper (Held On: 15 June 2022 Shift 3) (Previous Year Paper)

RRB NTPC • 2022 • 120 questions • 90 minutes • Answer key and solutions

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FULL TEST

Q1. If $(y + z) = 8$ and $yz = 6$, find the value of $(y - z)^2$.

(a) 36
(b) 40
(c) 49
(d) 44

Q2. Which of the following is NOT a tax subsumed under GST in India?

(a) Service tax
(b) Additional custom duty
(c) Income Tax
(d) Central excise duty

Q3. Who among the following, under the Weaker Sections category, are eligible to avail loans under priority sector loans?

(a) Persons with no disabilities
(b) Medium and big Farmers
(c) Self Help Groups
(d) Artisans, village and cottage industries where individual credit limits exceed Rs. 1 lakh

Q4. If the difference between the mean and the mode of certain observations is 69, then the difference between the mean and the median is _____.

(a) 21
(b) 22
(c) 23
(d) 24

Q5. The cost of painting a cube on all the external surfaces at the rate of Rs. 2/cm ^{2}is Rs. 588. Find the volume of the cube (in cm^3).

(a) 274.625
(b) 343
(c) 512
(d) 216

Q6. Malayalam is the official language of the state of _____.

(a) Kerala
(b) Telangana
(c) Goa
(d) Maharashtra

Q7. In a class, Rajiv has scored the 14^(th) position from the top and Vatsala has scored the 32^(nd) position from the last. In between Rajiv and Vatsala, there are 12 students in the class. What is the maximum possible number of students in the class?

(a) 56
(b) 60
(c) 48
(d) 58

Q8. Gotipua is a traditional dance form in the state of _____.

(a) Odisha
(b) Uttar Pradesh
(c) Bihar
(d) Manipur

Q9. Which of the following is the fourth most populous country in the world, as per US Census Bureau 1 July 2021 data?

(a) Pakistan
(b) Brazil
(c) Indonesia
(d) USA

Q10. Among the given ores, which one has the highest iron content?

(a) Limonite
(b) Siderite
(c) Hematite
(d) Pyrite

Q11. In an election, 90% of those entitled to vote cast their ballot. 80% of the votes cast was valid. The winner got 60% of the valid votes. If the winner got 64800 votes, what was the number of people entitled to vote?

(a) 200000
(b) 175000
(c) 125000
(d) 150000

Q12. Simplify:

$30 \div (40 \div 2^2 \times 10 \div 5) \times 6 - 4$

(a) 5
(b) 300
(c) 896
(d) -3.75

Q13. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the one that is different.

(a) GEM
(b) YWE
(c) JHQ
(d) KIQ

Q14. Who was the India's flag bearer at the opening ceremony of Tokyo Olympics 2020 with Mary Kom?

(a) Neeraj Chopra
(b) Ravi Kumar Dahiya
(c) Manpreet Singh
(d) Dutee Chand

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Q15. If the mean of numbers 33, x, 47, 83, and 109 is 67, what is the mean of 50, 64, 100, 126, and x?

(a) 84
(b) 80
(c) 81.8
(d) 80.6

Q16. Five friends, A, B, C, D and E, are of different ages. E is older than only two persons. D is younger than only one person. If A is the eldest among all, which of the following conclusions is definitely correct?

(a) C and D are the two youngest persons.
(b) C and E are the two youngest persons.
(c) B and E are the two youngest persons.
(d) C and B are the two youngest persons.

Q17. Teejan Bai is an exponent of Pandavani, a traditional performing art form, from Chhattisgarh, in which she enacts tales from the _____ with musical accompaniments.

(a) Abhijnana sakuntalam
(b) Mahabharata
(c) Ramayana
(d) Katha Sarit Sagar

Q18. The angle of elevation of an aeroplane from a point on the ground is 45°. After a flight of 12 seconds horizontally, the angle of elevation changes to 30°. If the aeroplane is flying at a height of 2400 m, then find the speed of the aeroplane (in m/s).

(a) 2(1 + √3)
(b) 2(√3 - 1)
(c) 200(√3 + 1)
(d) 200(√3 - 1)

Q19. On 21 May 2021, Hockey India was honoured with which prestigious award by the International Hockey Federation (FIH)?

(a) Etienne Glichitch Award
(b) Asunta Lakra Award
(c) Aces Award
(d) Tenzing Norgay Award

Q20. Six friends, A, B, C, D, E and F, are sitting in a circle facing the center but not in the same order. B and E are not immediate neighbours of each other. B is sitting second to the right of A. C is not an immediate neighbour A. Only two people sit between D and A.

What is the sitting position of F?

(a) Immediate neighbour of both A and C
(b) Second to the left of A
(c) Third to the right of C
(d) Immediate left of E

Q21. In which of the following battles did Ahmadullah Shah defeat Henry Lawrence?

(a) The Third battle of Panipat
(b) Battle of Plassey
(c) Battle of Chinhat
(d) Battle of Buxar

Q22. Who among the following inaugurated the Indian Army Memorial in the famous Italian town of Cassino in July 2021?

(a) Pankaj Singh
(b) MM Naravane
(c) Bikram Singh
(d) Dalbir Singh Suhag

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Q23. Poompuhar beach located in the state of Tamil Nadu along the Bay of Bengal is famous for the _____ festival.

(a) Pushkar Mela
(b) Chitra Pournami
(c) Ganga Sagar Mela
(d) Charak Puja

Q24. _____ is NOT among the three major rivers originating from the Western Ghats.

(a) Godavari
(b) Cauvery
(c) Mahanadi
(d) Tungabhadra

Q25. Evaluate:

cbrt16384 ÷ cbrt256

(a) 2
(b) 6
(c) 4
(d) 3

Q26. Read the given information carefully and answer the question that follows.

Eight friends, Janak, Kuldeep, Punit, Kavita, Naveen, Azad, Vikas and Anil, are sitting around a square table, four of them are sitting at the four corners and the rest four are sitting at the middle of each of the four sides of the table. The ones who sit at the corners face the centre, while those who are sitting in the middle of the sides face away opposite to the centre of the table. Janak faces the centre and is third to the right of Azad. Naveen faces the centre, but is not an immediate neighbour of Azad. Only one person is sitting between Azad and Vikas. Kavita is sitting second to the right of Kuldeep. Kuldeep faces the centre. Punit is not an immediate neighbour of Janak.

Which of the following statements is true regarding Punit?

(a) Kuldeep sits third to the left of Punit.
(b) Punit is an immediate neighbour of Azad.
(c) Punit is an immediate neighbour of both Azad and Janak.
(d) Punit faces away from the centre of the table.

Q27. Select the number that can replace the question mark (?) in the following series.

5, 16, 29, 46, 65, 88, ?

(a) 116
(b) 117
(c) 107
(d) 115

Q28. A train covered a certain distance at a uniform speed. If the train had been 12 km/h faster, it would have taken 8 hours less than the scheduled time. If the train were slower by 12 km/h, the train would have taken 12 hours more than the scheduled time. Find the length of the journey (in km).

(a) 1480
(b) 2860
(c) 1440
(d) 2880

Q29. Which of the following statements aptly defines 'high powered money'?

(a) Money consumed by families or individuals.
(b) The excess of total government consumption.
(c) The currency issued by the Central Bank that can be held by the public or by the commercial banks.
(d) Money collected from families or individuals and deposited in a bank.

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Q30. In a certain code language, if 'GREEN' is written as '209222213', 'BLUE' is written as '2515622', how will 'WHITE' be written in that language?

(a) 41918722
(b) 41917821
(c) 41918721
(d) 41918622

Q31. Which Article of the Constitution of India deals with the abolition of untouchability?

(a) Article 17
(b) Article 19
(c) Article 18
(d) Article 16

Q32. Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

2.98 of 5 + 1.96 of 5 - 4 ÷ 2 + 0.98 = ?

(a) 25
(b) 22
(c) 19
(d) 24

Q33. Rebeca Grynspan, an economist was appointed as the Secretary General of which organization in June 2021?

(a) UNCTAD
(b) UNISDR
(c) UNICEF
(d) UNHRC

Q34. Guava is the only brother of Grape's father. Mango is the mother of Apple. Apple is the brother of Kiwi. The wife of Apple's maternal grandfather is also the paternal grandmother of Grape. How is Mango related to Guava?

(a) Mother's sister
(b) Sister's daughter
(c) Sister
(d) Mother

Q35. Five boxes, A, B, C, D and E are kept in a vertical arrangement. Only one box is kept below box C. There are two boxes kept between boxes D and C. Box E is kept at the second place from the top. Only two boxes are kept above box A. Which box is kept at the bottom?

(a) Box C
(b) Box B
(c) Box E
(d) Box D

Q36. Which of the following keyboard shortcuts is used in a Windows 10 system to switch between open apps?

(a) Ctrl + N
(b) Alt + Tab
(c) Ctrl + Tab
(d) Alt + N

Q37. A train running at the speed of 95 km/h crosses a pole in 18 seconds. What is the length of the train in meters?

(a) 455 m
(b) 465 m
(c) 475 m
(d) 480 m

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Q38. In a certain code language, if 'NEWTON' is written as 'LUCFKL', 'PASCAL' is written as 'JYGWYN', how will 'TESLA' be written in that language?

(a) FUGMY
(b) FUFMY
(c) ETFMX
(d) FUGNY

Q39. Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.

SLU_ _ INGS _ _ ICING _ _UICIN_ _LUICI_ _

(a) SLICLUGNGL
(b) ICLUSLGSNG
(c) LICUSLGLGN
(d) SGCLUSNGSL

Q40. Assuming that it is Wednesday on 5^(th) August 1994 then which day of the week will be on 2^(nd) September 1995?

(a) Wednesday
(b) Tuesday
(c) Thursday
(d) Monday

Q41. If × stands for subtraction, ÷ stands for addition, + stands for division, and - stands for multiplication, which of the following equations is correct?

(a) 45 - 15 ÷ 15 × 60 + 16 = 42
(b) 25 + 5 × 20 ÷ 5 - 16 = 6
(c) 9 ÷ 28 - 10 × 15 + 9 = 10
(d) 16 ÷ 20 - 6 + 10 × 12 = 16

Q42. Which of the following is the unit of electrical resistance?

(a) Watt
(b) Coulomb
(c) Newton
(d) Ohm

Q43. _____ in economics is a curve that, when plotted on a graph, shows all the combinations of two factors that produce a given output.

(a) Duopoly
(b) Long run
(c) Elasticity
(d) Isoquant

Q44. Megasthenes was an ambassador who was sent to the court of Chandragupta Maurya by the _____ ruler named Seleucus Nicator.

(a) Greek
(b) Arab
(c) Chinese
(d) Persian

Q45. In an Excel worksheet, the content of the active cell is displayed in _____.

(a) Name box
(b) Formula bar
(c) Title bar
(d) Status bar

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Q46. The sides AB, BC, CD and DA of a quadrilateral ABCD touch a circle at P, Q, R and S, respectively. If AB = 16 cm, DS = 10 cm RC = 3 cm, then find the perimeter of the quadrilateral ABCD (in cm).

(a) 56
(b) 60
(c) 55
(d) 58

Q47. Starting from a juice corner, Aditya, looking for ATM, walked 20 m due North. He turned right and walked 18 m. He again turned right and walked 20 m. Then he finally turned left and walked 12 m to reach the ATM. What is the shortest distance to the ATM machine and in which direction is the ATM machine from his starting point? (All turns are 90° turns only)

(a) 30 m due West
(b) 6 m due East
(c) 6 m due North
(d) 30 m due East

Q48. The volume of a solid spherical ball was $972\pi cm^3$. It was melted and 27 identical spheres were made with the molten material, leaving no wastage. What is the total surface area of the 27 smaller spheres taken together?

(a) 648π cm2
(b) 972π cm2
(c) 810π cm2
(d) 324π cm2

Q49. At a certain rate of simple interest per annum a sum of money amounts to 13/8 of itself in 10 years. What is the rate of simple interest per annum?

(a) 6.25%
(b) 7.5%
(c) 7.25%
(d) 5%

Q50. The Kanjira is a frame drum of South India. It consists of a skin (usually iguana) stretched and pasted on a circular _____ frame.

(a) brass
(b) dried pumpkin
(c) wooden
(d) steel

Q51. El Nino, the event during which warm ocean current flows along the Peruvian coast happens in which ocean?

(a) Atlantic Ocean
(b) Arctic Ocean
(c) Indian Ocean
(d) Pacific Ocean

Q52. Nine friends K, L, M, N, O, P, Q, R and S are sitting in a row and are facing South. L is sitting to the immediate right of M. M at the second place to the right of N. K is sitting at one end of the row. Only Q is seated between P and O. O is sitting at the third place to the left of K. S is sitting to the immediate left of N. There are only five people sitting to the right of M. Who is sitting to the immediate left of M?

(a) L
(b) P
(c) Q
(d) R

Q53. In a building, there were a total of seven floors. The floors were numbered 1 to 7 from bottom to top, floor 1 being the ground floor. Each of the 7 men among A, B, C, D, E, F and G, occupied a floor, not necessarily in the same order. G occupied floor number 4. Only one person lived below the floor occupied by E. B was exactly above A. C was exactly below G. F occupied the topmost floor. Which man occupied floor 1?

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(a) C
(b) A
(c) E
(d) D

Q54. The area of a rectangle whose length and width are in the ratio 9 : 5 is given as 180 cm². Find the perimeter of the rectangle.
(a) 70 cm
(b) 56 cm
(c) 54 cm
(d) 42 cm

Q55. The HCF of two different numbers is always 1, when:
(a) one number is odd and the other number is even
(b) both numbers are odd numbers
(c) both numbers are even numbers
(d) both numbers are prime numbers

Q56. A certain sum doubles itself in 8 years on simple interest per annum. Find the rate percentage of the interest.
(a) 12%
(b) 12.5%
(c) 11%
(d) 11.5%

Q57. If three solid gold spherical beads of radii 6 cm, 8 cm, and 10 cm, respectively are melted into one spherical bead, then what is the radius (in cm) of the larger bead?
(a) 16 cm
(b) 15 cm
(c) 13 cm
(d) 12 cm

Q58. Which of the following awards did Amitabh Bachchan receive on 19 March 2021?
(a) International Federation of Film Archives (FIAF) award
(b) Maharashtra Bhushan Award
(c) Dadasaheb Phalke Award
(d) Stardust 'International Icon of the Year' Award

Q59. If $x(x + y + z) = 30$, $y(x + y + z) = 64$, $z(x + y + z) = 50$, then find the value of $2(x + y + z)$, where $x, y, z > 0$.
(a) 22
(b) 26
(c) 20
(d) 24

Q60. If $\sin^2\beta - \sin 30° = 0$ and β is an acute angle, find the value of β.
(a) 60°
(b) 90°
(c) 45°
(d) 0°

Q61. The sides of two squares are in the ratio 4 : 3 and the sum of their areas is 225 cm². Find the perimeter of the smaller square (in cm).
(a) 44
(b) 30
(c) 36
(d) 48

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Q62. Pongal, a harvest festival is dedicated to the _____.

(a) Goddess Saraswati
(b) God of Fire
(c) Goddess Ganga
(d) Sun God

Q63. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some professors are doctors.

2. No doctor is a researcher.

Conclusions:

I. Some professors are not researchers.

II. All professors are researchers.

(a) Only conclusion I follows
(b) Neither conclusion I nor II follows
(c) Both conclusions I and II follow
(d) Only conclusion II follows

Q64. Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.

XY_XY_ _ZXYX_ _XYXY_ _ _ _

(a) YXYYZZXY
(b) ZXYYZZXY
(c) ZXYYZZXZ
(d) ZYYYZZXY

Q65. Suhas travelled by train to cover 5/12 of the journey, and then traveled by bus to cover 1/3 of journey. After that he travelled the remaining 36 km on a bicycle. How much in all did Suhas travel?

(a) 132 km
(b) 168 km
(c) 144 km
(d) 150 km

Q66. 7/18 of the balls in a drum were red, 8/15 of the balls in the drum were blue and the rest were yellow. If there were 84 more red balls in that drum than there were yellow balls, what was the total number of balls in the drum?

(a) 360
(b) 90
(c) 180
(d) 270

Q67. Simplify the following expression

0.002 + 5.025 - 35.08 - 5.058

(a) 35.111
(b) -45.165
(c) 45.165
(d) -35.111

Q68. In which year did Sultan Iltutmish's daughter, Raziyya, become Sultan?

(a) 1236 CE
(b) 1226 CE
(c) 1256 CE
(d) 1246 CE

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Q69. The first index number of wholesale prices commenced in India for the week beginning from _____ and the base week ending 19 August 1939.

(a) 21 January 1942
(b) 1 January 1942
(c) 10 January 1942
(d) 11 January 1942

Q70. Kuldiep Singh took additional charge of which post in May 2021?

(a) Air Chief Marshal
(b) Director General of the National Investigation Agency
(c) Air Officer in Charge Personnel
(d) Deputy Chief of Army Staff

Q71. The Ahilya fort was constructed in the 18^(th) Century on the banks of _____ river.

(a) Ganga
(b) Tapi
(c) Narmada
(d) Kosi

Q72. Who among the following fighter jet pilots was part of the IAF's Republic Day tableau on 26^(th) January 2022?

(a) Lieutenant Mohana Singh
(b) Lieutenant Shivangi Singh
(c) Lieutenant Bhawana Kanth
(d) Lieutenant Avani Chaturvedi

Q73. Rahul was born on 10 June 1992. On which day of the week was he born?

(a) Thursday
(b) Friday
(c) Tuesday
(d) Wednesday

Q74. The total surface area of a hemisphere is 108*π cm*². What is the volume of the hemisphere?

(a) 216π cm³
(b) 54 √3 π cm3
(c) 108 √6 π cm3
(d) 144π cm3

Q75. In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. In three of the four pairs, the same pattern is applied and hence they form a group. Select the number-pair that does NOT belong to this group.

(a) 19, 375
(b) 17, 303
(c) 8, 82
(d) 24, 590

Q76. Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement:

"If you do not work hard, I will fire you."- A statement by the Head of Department to a junior.

Assumptions:

I. Warning given by the Head may result in the junior working hard.

II. None of the juniors is working hard at present.

(a) Only assumption II is implicit.
(b) Both I and II are implicit
(c) Neither I nor II is implicit.

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(d) Only assumption I is implicit.

Q77. Which of the following numbers is NOT divisible by 8?

(a) 35792
(b) 35552
(c) 35112
(d) 35412

Q78. Which of the following statements is TRUE about mixed economy?

(a) A mixed economy is one in which the public sector (consisting of government enterprises) and the private sector (consisting of private enterprises) coexist with each other
(b) A mixed economy is one in which only the public sector exists.
(c) A mixed economy is one in which the public sector (consisting of government enterprises) and the private sector (consisting of private enterprises) do not coexist with each other.
(d) A mixed economy is one in which only the private sector (consisting of private enterprises) exists.

Q79. Six friends A, B, C, D, E and F like to eat one fruit each among Mango, Apple, Orange, Kiwi, Guava and Grapes. D likes Mango. C neither likes Guava nor does he like Kiwi. E likes Orange. F neither likes Grapes nor does he like Guava. A likes Apple.

Who likes Grapes?

(a) F
(b) C
(c) B
(d) D

Q80. 12 men can build a wall in 24.5 days. How many men would be able to build five such walls in 49 days?

(a) 30
(b) 40
(c) 28
(d) 50

Q81. A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

Question:

In a certain code language, "pu ma kas' means 'we eat mangoes'. What is the code of 'mangoes'?

Statements:

I. 'la ti kas' means 'we are graduate'.

II. 'hum tup pu' means 'they eat bananas'.

(a) Statement II alone is sufficient, while statement I alone is not sufficient to answer the question.
(b) Statements I and II together are sufficient to answer the question.
(c) Statement I alone is sufficient, while statement II alone is not sufficient to answer the question.
(d) Statements I and II together are not sufficient to answer the question.

Q82. Which Articles of the Indian Constitution are related with the Right against Exploitation?

(a) 23 to 24
(b) 19 to 22
(c) 25 to 28
(d) 14 to 18

Q83. _____ city has emerged as the 'Silicon Valley of India'.

(a) Bengaluru
(b) Gurgaon
(c) Chennai
(d) Pune

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Q84. Which of the following is a tributary of the Indus river?

(a) Subansiri
(b) Son
(c) Beas
(d) Jonk

Q85. Which of the following Indian sea ports is located in the far south as compared to the others?

(a) Chennai
(b) Tuticorin
(c) Mangalore
(d) Paradip

Q86. The average spending of a family per week during a four-week period on essentials items was Rs. 1,475. During the first three weeks the family spent Rs. 1,200, Rs. 1,500 and Rs. 1,875 on such items. How much did the family spend on these items in the final week to ensure that the weekly average is maintained?

(a) Rs. 1,275
(b) Rs. 1,375
(c) Rs. 1,325
(d) Rs. 1,225

Q87. The geostrophic flow conditions occur when the pressure gradient force is balanced by _____.

(a) Geostatic force
(b) Gravitational force
(c) Hydrostatic force
(d) Coriolis force

Q88. Prince and Rakesh start walking from two different points 'A' and 'B', respectively. Prince walks 9 km north, then turns to the east and walks 7 km, then turns to the west and walks 5 km, and finally turns to the north and walks 6 km to reach point 'C'. Similarly, Rakesh walks 5 km north, then turns to the west and walks 9 km, and finally turns to the north, walks 10 km and meets Prince at point 'C'. What is the distance between Prince's and Rakesh's starting points?

(a) 21 km
(b) 11 km
(c) 17 km
(d) 13 km

Q89. Select the letter from among the given options that can replace the question mark (?) in the following series.

D, E, Z, I, V, M, ?

(a) Q
(b) R
(c) T
(d) S

Q90. Which of the following statements about the National Commission for Scheduled Castes is/are true?

1. It investigates and monitors all matters relating to the safeguards provided for the Scheduled Castes.
2. It participates and advises on the planning process of socio-economic development of the Scheduled Castes.

(a) Neither 1 nor 2
(b) Only 1
(c) Both 1 and 2
(d) Only 2

Q91. If the letters in each the following strings are omitted and then the remaining numbers are arranged in increasing sequence, which number will come in the middle?

33A, 44R, 41V, 54D, 21S, C56, D46, V68, F36, G32, 61C, 47G, N55

(a) 41

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(b) 44
(c) 54
(d) 46

Q92. Who among the following was a popular name of the 14^(th) century Persian literature, associated with ghazals and was loved for his perfect personality and art of poetry?
(a) Hafez
(b) Muhammad Iqbal
(c) Rumi
(d) Mirza Ghalib

Q93. Read the give statements and conclusions carefully. Decide which of the given conclusion(s) follow(s) based on the given statements.
Statement:
$M \leq N < O$, $A \geq B < C = O$
Conclusions:
I. $N > B$
II. $C > M$
(a) Only conclusion II follows
(b) Neither conclusion I nor II follows
(c) Both the conclusions I and II follow
(d) Only conclusion I follows

Q94. The central angle of the sector in a pie chart representing the number of students who walked to school measured 63°. What is the percentage of students who walked to school?
(a) 16.5%
(b) 17.5%
(c) 18.5%
(d) 18%

Q95. The Gateway of India was erected to commemorate the landing of _____ and Queen Mary at Apollo Bunder on their visit to India in 1911.
(a) King George III
(b) King George VI
(c) King George V
(d) King George IV

Q96. A and B together can do a piece of work in 10 days. If A alone can do the same work in 15 days and C alone can do the same work in 20 days, then in how many days can B and C together do the same work?
(a) 12
(b) 113/4
(c) 11
(d) 121/5

Q97. A sum of Rs. 10,000 was invested on compound interest in two parts. One part at 10% p.a. and the other part at 20% p.a., compounded yearly for two years. If the total amount received on maturity after two years was Rs. 12,928, then find the sum that was invested at 10% compounded interest p.a.
(a) Rs. 7,200
(b) Rs. 6,400
(c) Rs. 6,500
(d) Rs. 6,000

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Q98. The difference between the compounded interest and the simple interest earned on a certain sum of money in two years at 9% interest per annum is Rs. 97.2. Find the sum invested.

(a) Rs. 10,000
(b) Rs. 15,000
(c) Rs. 12,500
(d) Rs. 12,000

Q99. Kolkali is a folk art performed in _____.

(a) Eastern part of Uttar Pradesh
(b) Southern part of Gujarat
(c) North Malabar region of Kerala
(d) Western part of Uttar Pradesh

Q100. Out of the three Pitakas, the Abhidhamma Pitaka deals with _____.

(a) Stories on Sarnath Pillar
(b) Philosophical matters
(c) Rules for those who joined the sangha
(d) Buddha's teachings

Q101. By selling an item for Rs. 2,332, a person incurred a loss of 12%. What was the cost price of the item?

(a) Rs. 2,650
(b) Rs. 2,620
(c) Rs. 2,625
(d) Rs. 2,675

Q102. The ratio of the number of boys to the number of girls in a school was 5 : 7. If there were 931 girls in the school, how many boys were there?

(a) 665
(b) 635
(c) 705
(d) 675

Q103. Which of the following is the study of vibrations within Earth?

(a) Graphology
(b) Ichthyology
(c) Selenology
(d) Seismology

Q104. In a blend of apple juice and orange juice, 20% was apple juice. In another blend of the two juices, 30% was orange juice. The two blends are mixed in a certain ratio of apple juice and orange juice in the mix was 4 : 3. Find the ratio of the first blend and the second blend, in that order, in the final mix.

(a) 10 : 29
(b) 9 : 26
(c) 5 : 14
(d) 2 : 7

Q105. The Intensive Agriculture District Programme (IADP) was launched as the first major experiment in intensive agriculture development in the year _____.

(a) 1965
(b) 1968
(c) 1960
(d) 1970

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Q106. Select the numbers from among the given options that can replace the question marks (?) in the following series.

123, 123, 110, 110, 121, 121, 108, 108, ?, ?

(a) 123, 123
(b) 119, 119
(c) 97, 97
(d) 127, 127

Q107. Which of the following is a noble gas/element?

(a) Ca
(b) F
(c) N
(d) Ne

Q108. Which of the following hospitals was awarded with the 'IMC RBNQ Performance Excellence Trophy 2020' in the healthcare sector in July 2021?

(a) A J Hospital and Research Centre, Mangalore
(b) P D Hinduja Hospital and Medical Research Centre, Mumbai
(c) Dr L H Hiranandani Hospital, Mumbai
(d) Kasturba Hospital, Manipal

Q109. What is the LCM of 98, 28 and 112?

(a) 1176
(b) 392
(c) 1568
(d) 784

Q110. Select the odd one out of the following types of clouds.

Cumulus, Cirrus, Cirrocumulus, Cirrostratus

(a) Cirrostratus
(b) Cumulus
(c) Cirrus
(d) Cirrocumulus

Q111. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All students are teachers.

All teachers are humans.

Conclusions:

I. All teachers are students.

II. All humans are students.

(a) Both the conclusions follow
(b) Only conclusion II follows
(c) Only conclusion I follows
(d) Neither conclusion I nor II follows

Q112. In a certain code language, 'RACE' is written as 'WFHJ' and 'TRAP' is written as 'YWFU'. How will 'FROM' be written in that language?

(a) LXUS
(b) KXTS
(c) KWTR
(d) LWUR

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Q113. Where is the Raniji ki baori or the 'Queen's Stepwell', the largest among the fifty step wells that were built to meet the need for water located?

(a) Banswara in Rajasthan
(b) Bundi in Rajasthan
(c) Jaipur in Rajasthan
(d) Jaisalmer in Rajasthan

Q114. Which of the following is an example of a non-metallic mineral?

(a) Pyrite
(b) Hematite
(c) Limestone
(d) Bauxite

Q115. When was Valmiki Ambedkar Awas Yojana launched?

(a) December 2002
(b) December 2001
(c) December 2000
(d) December 2003

Q116. A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient/necessary to answer the question.

Question:

What will be the total price of 10 chairs, each of which is of the same price?

Statements:

I. One-fourth of the price of each chair is Rs. 140.

II. The total price of 3 chairs is Rs. 560 more than the total price of 2 chairs.

(a) Statement II alone is sufficient, while Statement I alone is not sufficient
(b) Either Statement I or Statement II is sufficient
(c) Both Statement I and Statement II are necessary
(d) Statement I alone is sufficient, while Statement II alone is not sufficient

Q117. The Attorney-General for India is appointed under which Article of the Constitution of India?

(a) Article 72
(b) Article 82
(c) Article 79
(d) Article 76

Q118. In a certain code language, the letters are coded as per their reverse alphabetical orders (A as 26 and Z as 1). However, if a consonant is immediately preceded as well as immediately followed by a vowel, it is coded as '66'.

What would be code for LEGAL in this language?

(a) 1566226615
(b) 1522662615
(c) 1566222615
(d) 1522202615

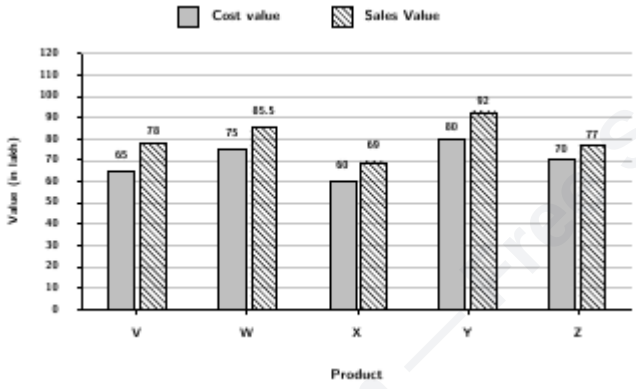
Q119. There are five friends - P, Q, R, S and T sitting in a row facing North. R is sitting exactly in the middle of the row. T is sitting to the immediate right and immediate left of S and R, respectively. Q is not sitting at the extreme end. Who is sitting second to the left of P?

(a) T
(b) R
(c) Q
(d) S

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Q120. Study the given graph and answer the question that follows.

The graph shows the total cost and sales values (in lakhs) of five products manufactured by a company.



In which product has the company earned maximum profit?

(a) Product X
(b) Product Z
(c) Product V
(d) Product W

ANSWER KEY

1	b	2	c	3	c	4	c	5	b	6	a	7	d	8	a	9	c	10	c
11	d	12	a	13	c	14	c	15	d	16	d	17	b	18	d	19	a	20	c
21	c	22	b	23	b	24	c	25	c	26	d	27	b	28	d	29	c	30	a
31	a	32	d	33	a	34	c	35	b	36	b	37	c	38	d	39	b	40	c
41	d	42	d	43	d	44	a	45	b	46	d	47	d	48	b	49	a	50	c
51	d	52	d	53	d	54	b	55	d	56	b	57	d	58	a	59	d	60	c
61	c	62	d	63	a	64	b	65	c	66	d	67	d	68	a	69	c	70	b
71	c	72	b	73	d	74	d	75	c	76	d	77	d	78	a	79	b	80	a
81	b	82	a	83	a	84	c	85	b	86	c	87	d	88	b	89	b	90	c
91	d	92	a	93	a	94	b	95	c	96	a	97	b	98	d	99	c	100	b
101	a	102	a	103	d	104	b	105	c	106	b	107	d	108	d	109	d	110	b
111	d	112	c	113	b	114	c	115	b	116	b	117	d	118	b	119	b	120	c

SOLUTIONS

Q1. Answer: (b) 40

Given:

$(y + z) = 8$

$(yz) = 6$

$(y - z)^2 = ?$

Concept used:

$(x - y)^2 = x^2 + y^2 - 2xy$

$(x + y)^2 = x^2 + y^2 + 2xy$

Calculations:

According to the question,

$(y + z) = 8$

Squaring on both sides,

$\Rightarrow (y + z)^2 = (8)^2$

=> $y^2 + 2yz + z^2 = 64$

=> $y^2 + 2(6) + z^2 = 64$

=> $y^2 + 12 + z^2 = 64$

=> $y^2 + z^2 = 64 - 12$

=> $y^2 + z^2 = 52$

Now for $(y - z)^2$

$(y - z)2 = y^2 + z^2 - 2yz$

=> $(y - z)2 = 52 - 2(6)$

=> $(y - z)^2 = 52 - 12$

=> $(y - z)^2 = 40$

Therefore The value of $(y - z)2$ is 40.

Alternate Method$(x - y)2 = (x + y)2 - 4xy$

$(y - z)2 = (y + z)2 - 4yz$

$(y - z)2 = (8)2 - 4 \times 6$

$(y - z)2 = 40$

Q2. Answer: (c) Income Tax

The correct answer is Income Tax.

Key Points

• Income Tax is not a tax subsumed under GST in India.

• GST refers to Goods and Services Tax. It is an indirect tax which has replaced many indirect taxes in India such as the excise duty, VAT, services tax, etc.

• The Goods and Service Tax Act was passed in the Indian Parliament on 29th March 2017 and came in result on 1st July 2017.

• The notable dissimilarity among GST and Income Tax is that the GST is impose on the consumption of the goods and services, whereas income tax is impose on the income of a person. In a way, GST is an indirect tax, whereas income tax is a direct tax.

Additional Information

• Service tax is a tax imposed by the government on service providers on sure service transactions, but is actually support by the customers.

• Additional Customs Duty (CVD)This duty, commonly refers to as countervailing duty (CVD), is imposed on imported goods in terms of section 3 of the Customs Tariff Act, 1975 and is equal to the Central Excise duty imposable on the like goods if produced or manufactured in India.

• An excise or excise tax (sometimes called an excise duty) is a kind of tax charged on goods produced within the country.

Q3. Answer: (c) Self Help Groups

The correct answer is Self Help Group.

Key Points

• Self-help groups are informal groups of people who come together to address their common problems.

• Some Villages face multiple problems related to poverty, illiteracy, lack of formal credit etc. These types of problems cannot go out at a particular level and require collective efforts

• It provides guarantee-free loans with terms finalized by the group at market-driven rates.

Additional Information

• The persons with disabilities are used to apply to all persons with disabilities including those who have long-period physical, mental, intellectual or sensory impairments which, in interaction with various Posture and environmental fencing obstruct their full and effective participation in society on an equal.

• Farmer who has more than 10 hectares of land are big farmers, the farmers who have 2 or less than 2 hectares of land are mentioned to as small farmers and those who range between 2 to 10 hectares are known as middle farmers.

Q4. Answer: (c) 23

Shortcut Trick

The empirical relationship between central tendencies is: (Mean − Mode) = 3 × (Mean − Median).

Given: Mean − Mode = 69

69 = 3 × (Mean − Median)

=> Mean − Median = 69 ÷ 3 = 23

Therefore The correct answer is 23.

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Alternate Method

Given: Difference between Mean and Mode (Mean − Mode) = 69.

Formula Used: Empirical relation: Mode = 3 Median − 2 Mean.

From the given condition: Mean − Mode = 69

=> Mode = Mean − 69

Substitute the value of Mode in the empirical formula:

=> Mean − 69 = 3 Median − 2 Mean

=> Mean + 2 Mean − 69 = 3 Median

=> 3 Mean − 3 Median = 69

=> 3(Mean − Median) = 69

=> Mean − Median = 69 ÷ 3

=> Mean − Median = 23

Therefore The correct answer is 23.

Additional Information

Empirical Relationship

In a moderately skewed distribution, the relationship is Mode = 3 Median − 2 Mean or (Mean − Mode) = 3 (Mean − Median).

Symmetric Distribution

For a perfectly symmetrical distribution, the values of Mean, Median, and Mode are all equal (Mean = Median = Mode).

Karl Pearson Coefficient of Skewness

It is calculated as S_k = (Mean − Mode) ÷ Standard Deviation, or 3(Mean − Median) ÷ Standard Deviation.

Q5. Answer: (b) 343

Given:

Cost of painting at a rate of Rs. 2/cm² = Rs. 588

Formula used:

The surface area of the cube = $6a^2$

The volume of the cube = $(a)^3$

Where 'a' is the side of the cube.

Calculations:

According to the question,

Cost of paintings = 2 × Surface area of a cube

$588 = 2 \times 6a^2$

=> $12a^2 = 588$

=> $a^2 = 588/12$

=> $a = \sqrt{49} = 7$ cm

Now the volume of Cube

Volume = $(7)^3 = 343$ cm³

Therefore The volume of the cube is 343 cm3.

Q6. Answer: (a) Kerala

The correct answer is Kerala.

Key Points

• Malayalam is a Dravidian language vocalized in the Indian state of Kerala by the Malayali people.

• It is one of 22 scheduled languages of India and is vocalized by 2.88% of Indians.

• Malayalam was nominated as a "Classical Language of India" in 2013.

• Malayalam has official language status in Kerala, Lakshadweep, and, Puducherry also.

• It is also vocalized by the Malayali population worldwide, especially in the Persian gulf countries, due to the large populations of Malayali emigrants there.

Additional Information

• Urdu is the second official language of Telangana state, but English is used for all government documents and as a language of the courts.

• The Andhra Pradesh Official Language Act 1966 is the core legislation to refer to with regard to Telugu.

• Marathi shall, as from the appointed day, be the language which has to be used for all official purposes mentioned in article 345

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of the Indian Constitution,

Q7. Answer: (d) 58

Given:

• Rajiv has scored the 14th position from the top and Vatsala has scored the 32nd position from the last.

• There are 12 students in between Rajiv and Vatsala.

Explanation:

• Position of Rajiv from top = 14

• Number of students in between Rajiv and Vatsala = 12

• So, position of Vatsala from top such that there are a maximum number of students in the class = 14 + 12 = 26

• maximum number of students in the class = Position of Vatsala from top + Position of Vatsala from last = 26 + 32 = 58

Hence, 58 is the correct answer.

Q8. Answer: (a) Odisha

The Correct answer is Orissa.

Key Points

• Gotipua is a traditional dance from Odisha India, and the forerunner of Odissi classical dance.

• It has been performed in Orissa for centuries by young boys, who dress up like women to worship Lord Jagannath and Krishna.

• The dance is being implemented by a group of boys who performs acrobatics encouraged by the life of Radha and Krishna.

• The dance of the Gotipuas goes along with traditional Odissi music with the primary clash being the Mardala.

Additional Information

• In Uttar Pradesh Kathak is one of the six leading classical dances of India developed. The word Katha, from which the name is obtained, means story.

• Jat-Jatin is the most famous folk dance of North Bihar, especially in the Mithila and Koshi domains.

• Lai Haraoba is the earliest form of dance in Manipur, and it forms the basis of all such dances. Lai Haraoba is a festival still celebrated in the state.

Q9. Answer: (c) Indonesia

The correct answer is Indonesia.

Key Points

• The Census Bureau's International Data Base approximately July 1, 2021, the Inhabitants of Indonesia at 275.1M (4th most populous).

• The number of inhabitants of Indonesia in 2021 was 273,753,191, a 0.7% increase from 2020.

• The Indonesia Inhabitants are projected to trend at around 275.40 Million in 2022, according to our econometric models.

• The inhabitant of Indonesia indicates 3.51% of the world´s total population which means that one person in every 29 people on the planet is a resident of Indonesia.

Additional Information

• The Inhabitant of Pakistan is expected at 225,199,937 or 225.200 million as of 1 July 2021.

• Pakistan stood number 5th in the world by citizens in the list of 235 countries/territories.

• The Inhabitants of Brazil is expected at 213,993,437 or 214.00 million as of July 1, 2021.

• The Inhabitants of U.S. in 2021 was 336,997,624, a 0.31% increase from 2020.

Q10. Answer: (c) Hematite

The correct answer is Hematite.

Key Points

• Hematite has 60-70% metallic content.

• It is Reddish and of the best quality.

• 80% of Hematite reserves are in Odisha, Jharkhand, Chattisgarh and Andhra Pradesh.

• Hematite ore is one of the most Important Industrial iron ores in terms of the Quantity used.

Additional Information

• Limonite, a type of major iron mineral, hydrated ferric oxide (FeO(OH)·_nH2O). It was initially known as one of a series of such oxides.

• Siderite, also known as Chalybite, iron carbonate (FeCO3), a universal mineral which is an ore of iron.

• Pyrite, also known as iron pyrite, a naturally occurring iron disulfide mineral

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Q11. Answer: (d) 150000

Shortcut Trick

Let total voters entitled to vote = 100 units

Voters who cast their ballot = 90% of 100 = 90 units

Valid votes = 80% of 90 = 72 units

Winner share = 60% of 72 = 43.2 units

Given: 43.2 units = 64800 => 1 unit = 1500

Total voters (100 units) = 100 × 1500 = 150,000

Therefore The correct option is D.

Alternate Method

Given:

Winner's Votes = 64,800

Winner's share = 60% of Valid Votes

Valid Votes = 80% of Votes Cast

Votes Cast = 90% of Total Voters Entitled

Formula Used:

Total Voters × Cast % × Valid % × Winner % = Winner's Votes

Total Voters (100%)

Votes Cast (90%)

Valid Votes (80% of 90% = 72%)

Winner (60% of 72% = 43.2%) = 64,800

Calculations:

=> Let the number of people entitled to vote be V.

=> Votes cast = 0.90 × V

=> Valid votes = 0.80 × (0.90 × V) = 0.72V

=> Winner's votes = 0.60 × (0.72V) = 0.432V

=> 0.432V = 64800

=> V = 64800 ÷ 0.432

=> V = 64,800,000 ÷ 432

=> V = 150,000

Therefore The correct option is D.

Additional Information

Successive Percentage Rule

When a value is changed by a%, b%, and c% successively, the final value = Initial × (a/100) × (b/100) × (c/100).

Election Terms

Valid Votes = Total Votes Cast − Invalid Votes. Winner's Share + Loser's Share = 100% of Valid Votes.

Base Value Identification

Always identify the base for each percentage. Here, 80% was based on votes cast, and 60% was based on valid votes.

Q12. Answer: (a) 5

Given:

30 ÷ (40 ÷ 2^2 × 10 ÷ 5) × 6 - 4

Concept used:

Calculations:

30 ÷ (40 ÷ 4 × 10 ÷ 5) × 6 - 4

=> 30 ÷ (10 × 2) × 6 - 4

=> 30 ÷ 20 × 6 - 4

=> 30/20 × 6 - 4

=> 3/2 × 6 - 4

=> 9 - 4 = 5

Therefore The simplified value of the given equation is 5.

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Q13. Answer: (c) JHQ

The positional values of English alphabet is as follows:

Let us deduce the relation between letter- clusters:

JHQ does not follow the pattern.

Hence, "JHQ" is the correct answer.

Q14. Answer: (c) Manpreet Singh

The correct answer is Manpreet Singh.

Key Points

• Mangte Chungneijang Mary Kom, the 6-time world boxing champion, and Manpreet Singh who is the Indian men's hockey team skipper will be India's flag-bearers at the opening ceremony of the Tokyo Olympics 2020.

• Mangte Chungneijang Mary Kom OLY is an Indian amateur boxer, politician, and incumbent Member of Parliament, Rajya Sabha.

• Manpreet Singh Sandhu is an Indian field hockey player and the captain of India's men's national field hockey team since May 2017.

• The Olympic 2021 was held in Tokyo, Japan.

Additional Information

• Subedar Neeraj Chopra is an Indian athlete who is the Olympic champion in javelin throw.

• Ravi Kumar Dahiya is an Indian freestyle wrestler who won a silver medal at the 2020 Tokyo Olympics in the 57 kg category.

• Dutee Chand is an Indian sprinter and present national champion in the women's 100 metres event.

Q15. Answer: (d) 80.6

Shortcut Trick

Total sum of the first set = 67 × 5 = 335.

Value of variable x = 335 − (33 + 47 + 83 + 109) = 335 − 272 = 63.

Total sum of the second set = 50 + 64 + 100 + 126 + 63 = 403.

New arithmetic mean = 403 ÷ 5 = 80.6.

Therefore The correct answer is 80.6.

Alternate Method

Given:

First set of numbers: 33, x, 47, 83, 109 with mean 67.

Second set of numbers: 50, 64, 100, 126, x.

Formula Used:

Arithmetic Mean = (Sum of all observations) ÷ (Total number of observations)

Calculations:

=> (33 + x + 47 + 83 + 109) ÷ 5 = 67

=> 272 + x = 67 × 5

=> 272 + x = 335

=> x = 335 − 272 = 63

Now, finding the mean of the second set:

=> New Set = 50, 64, 100, 126, 63

=> Sum = 50 + 64 + 100 + 126 + 63 = 403

=> New Mean = 403 ÷ 5

=> New Mean = 80.6

Therefore The correct answer is 80.6.

Additional Information

Arithmetic Mean Properties

If every observation in a set is increased or decreased by a constant k, the mean also increases or decreases by k respectively.

Sum of Deviations

The algebraic sum of deviations of a set of observations from their arithmetic mean is always zero.

Combined Mean Formula

For two sets with means M1 and M2 and sizes n1 and n2, Combined Mean = (n1M1 + n2M2) ÷ (n1 + n2).

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Q16. Answer: (d) C and B are the two youngest persons.

Friends: 5, namely A,B,C,D,E.

GIven:

• E is older than only two persons.

• | (Eldest) |

E
(Youngest)

• D is younger than only one person.

• | (Eldest) |

D
E
(Youngest)

• A is the eldest among all.

• | A(Eldest) |

D
E
(Youngest)

Explanation: Using the given information, the following table can be drawn.

• | Case1 | Case2 |

A(eldest)	**A(eldest)**
D	D
E	E
C	B
B	C

So, C and B are the two youngest persons.

• Thus, only statement 4 of the question satisfies the given instructions.

Hence, "C and B are the two youngest persons" is the correct answer.

Q17. Answer: (b) Mahabharata

The Correct answer is Mahabharata.

Key Points

• Teejan Bai is a proponent of Pandavani, a traditional art form, from Chhattisgarh, in which she approves tales from the Mahabharata, with musical background.

• The Mahabharata is one of the two major Sanskrit Saga of ancient India the other being the Ramayana.

• It tells the struggle among two groups of cousins in the Kurukshetra war and the destiny of the Kaurava and the Pandava princes and their beneficiaries.

• It also contains Philosophical and devotional material, such as a discussion of the four "goals of life" or Purusartha.

Additional Information

• Possibly the greatest Sanskrit director, Mahakavi Kalidas wrote Abhigyan Shakuntalam nearly 2,500 years ago.

• The Ramayana is an ancient Sanskrit epic which follows Prince Rama's quest to save his beloved wife Sita from the grips of Ravana with the help of an army of monkeys. It is traditionally assigned to the authorship of the sage Valmiki and dated to around 500 BCE to 100 BCE.

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• The Katha Sarit Sagar is a famous 11th-century collection of Indian legends, fairy tales and folk epics as retold in Sanskrit by the Shaivite Somadeva.

Q18. Answer: (d) 200(√3 - 1)

Shortcut Trick

For a constant height (h), the speed of an aeroplane moving horizontally is given by:

Speed = [h × (cot θ2 − cot θ1)] ÷ Time

Given: h = 2400 m, θ1 = 45°, θ2 = 30°, Time = 12 s.

=> Speed = [2400 × (cot 30° − cot 45°)] ÷ 12

=> Speed = 200 × (√3 − 1)

Therefore The correct answer is 200(√3 − 1) m/s.

Alternate Method

Given:

Initial angle of elevation (θ1) = 45°

Final angle of elevation (θ2) = 30°

Height (h) of the aeroplane = 2400 m

Time duration (t) = 12 seconds

Let x be the horizontal distance from point P to the initial position and y be the distance to the final position.

=> In the first case: tan 45° = height ÷ x

=> 1 = 2400 ÷ x => x = 2400 m

=> In the second case: tan 30° = height ÷ y

=> 1/√3 = 2400 ÷ y => y = 2400√3 m

=> Distance covered (d) = y − x = 2400√3 − 2400 = 2400(√3 − 1) m

=> Speed = Distance ÷ Time = 2400(√3 − 1) ÷ 12

=> Speed = 200(√3 − 1) m/s

Therefore The correct answer is 200(√3 − 1) m/s.

Additional Information

Trigonometric Ratios

The basic ratio used in height and distance is tan θ = Perpendicular ÷ Base. For these problems, cot θ = Base ÷ Perpendicular is also useful for horizontal distance.

Angle of Elevation and Distance

As an object moves away from the observer at a constant height, the angle of elevation decreases. If it moves toward the observer, the angle increases.

Speed-Distance Relation

Speed = Distance ÷ Time. In problems involving horizontal flight, the distance is the difference between horizontal components at two different time intervals.

Q19. Answer: (a) Etienne Glichitch Award

The correct answer is Etienne Glichitch Award.

Key Points

• Etienne Glichitch Award, 2021

• On May 21 (Friday), 2021, Hockey India received the esteemed Etienne Glichitch Award in honour of its contribution to the expansion and improvement of the sport in the nation.

• During the HockeyInvites virtual conference, the awards were presented by the International Hockey Federation (FIH), the organisation that oversees the sport.

• It was a component of the 47th FIH Congress, which ended with the FIH Honorary Awards.

• According to a Friday press release from the FIH, "Hockey India was announced as the recipients of the Etienne Glichitch Award in appreciation of its exceptional commitment to the growth and development of Hockey."

Additional Information

• The honour carries Etienne Glichitch's name, who served as the FIH's Hon. Secretary from 1966 until 1984, when he was elected its President, a position he held until 1996.

• His innovative methods and great dedication to the sport helped to lay the foundation for the FIH as it is recognised today.

• Gyanendro Ningombam, the president of Hockey India, thanked the FIH for recognising Hockey India's efforts to develop the sport in India.

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Q20. Answer: (c) Third to the right of C

Given:

Number of friends = 6

Name of friends = A, B, C, D, E and F

Solution:

• B is sitting second to the right of A

• Only two people sit between D and A.

• C is not an immediate neighbour A.

• B and E are not immediate neighbours of each other. So, B and F are neighbours of each other.

So, F is third to the right to C.

Hence, "Third to the right of C" is the correct answer.

Q21. Answer: (c) Battle of Chinhat

The correct answer is Battle of Chinhat.

Key Points

• The famous battle of Chinhat in Ismailganj of Lucknow(Uttar Pradesh) on 30 June 1857, opposed British forces' guidance by Henry Lawrence.

• Henry Lawrence died as an out-turn of an aggressive Battle.

• Barkat shah guides one of the most powerful armies with Ahmadullah Shah as his leader

Additional Information

• The Third Battle of Panipat took place on 14 January 1761 between the Maratha Empire and the captured army of the Durrani Afghan Empire. The battle took place in and around the city of Panipat, in the north of Delhi.

• The Battle of Plassey was a conclusive success of the British East India Company on the Nawab of Bengal and his French merge on 23 June 1757, under the lead under the guidance of Robert Clive.

• The Battle of Buxar was fought between 22 and 23 October 1764, between the forces under the order of the British East India Company, headed by Hector Munro, and the integrated armies of Mir Qasim, Nawab of Bengal 1764.

Q22. Answer: (b) MM Naravane

The correct answer is MM Naravane.

Key Points

• Indian Army Memorial

• From July 5 to July 8, 2021, General MM Naravane, the Chief of Army Staff (COAS), traveled to Italy and the United Kingdom (UK).

• The Army Chief inaugurated the Indian Army Memorial in the well-known Italian village of Cassino and will also receive training at the Counter IED Center of Excellence for the Italian Army in Cecchingola, Rome.

• According to the Ministry of Defence, he will meet with his counterparts and top military officers during his four-day tour to Italy and the UK,, with the goal of expanding India's defence cooperation.

• Over 5,000 Indian soldiers who lost their lives battling the Japanese and German forces during World War II (1939 to 1945) are remembered by the Indian Army Memorial that was built in Cassino town.

Additional Information

• In order to fight for Italy's liberation between 1943 and 1945, about 50,000 Indian soldiers were sent there.

• According to former Italian Army Chief General Fabrizio Castagnetti, the fourth, eighth, and tenth Indian Infantry Divisions participated in both the brutal fight to take Mount Cassino and the subsequent difficult operation to breach the Gothic Line.

• Indian soldiers who served in Italy during World War II are buried in other cemeteries throughout the country, in addition to Cassino.

• During the Second World War, the Indian soldiers assisted in the liberation of several Italian cities, including Luca, Perugia, San Marino, Florence, Forli, Cesena, Ferrara, and Bologna.

• Six Indian soldiers who were fighting alongside other allied forces in Italy's liberation had also been awarded the renowned Victoria Cross.

Q23. Answer: (b) Chitra Pournami

The correct answer is Chitra Pournami.

Key Points

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• Poompuhar Beach

• The natural and historic Poompuhar Beach is situated along the Bay of Bengal in Poompuhar, Tamil Nadu, India.

• The beach begins at the Kaveri River and stretches 3 kilometres northward toward Neithavasal.

• South Indian history is very important to this beach and the city of Poompuhar.

• A significant celebration for this beach is called Chitra Pournami, and it takes place in the Tamil month of Chittrai at the full moon.

• During the new moon in the Tamil months of Thai and Adi, a holy dip is also observed near the mouth of the Kaveri River.

Additional Information

• This beach's sand extends for around three kilometres.

• To avoid erosion, granite stones have just been added to the shore.

• The closest town, Mayiladuthurai, is about 24 kilometres away from this beach and is situated on the bank of the Kaveri River.

• An engraved monument is another attraction near Poompuhar Beach in addition to Chitra Pournami.

• The Silappathikara Art Gallery is another one, and it provides information about the area's past.

• The Zion Church and the Thiruppallavaneeswaram Temple, both of which are close to Poompuhar Beach, should also be visited.

Q24. Answer: (c) Mahanadi

The correct answer is Mahanadi.

Key Points

• The Western Ghats, also called Sahyadri, north-south running range of mountains or hills in western India that for the crest of the western edge of the Deccan plateau parallel to the Malabar coast of the Arabian sea.

• The major rivers originating in the western ghat are the following

• The Godavari is India's second longest river after the Ganga and the third largest in India, drains about 10% of India's total geographical area. Its source is in Trimbakeswar, Nashik, Maharashtra.

• Cauvery is one of the major Indian rivers flowing through Karnataka and Tamil Nadu states. In ancient Tamil Literature, the river was also called Ponni.

• The Tungabhadra River is a river that starts flowing through the state of Karnataka during most of its course. before flowing along the border between Telangana, and Andhra Pradesh and ultimately joining the Krishna River near Gundimalla village in Jolumba Godwal district of Telangana.

Additional Information

• The Mahanadi is a major river in East Central India. it drains an area of around 132,100 kilometres and has a total length of 900 kilometres.

• Mahanadi is also known for the Hirakud dam. The river flows through the states of Chattisgarh and Odisha and finally merged with the Bay of Bengal.

Q25. Answer: (c) 4

Given:

cbrt16384 / cbrt256

Calculation:

(16384)^(1/3) /(256)^(1/3)

=> (16 × 16 × 16 × 4)^(1/3)/(8 × 8 × 4)^(1/3)

=> 16(4)^(1/3)/4(4)^(1/3)

=> 16/4 = 4

Therefore The simplified value is 4.

Q26. Answer: (d) Punit faces away from the centre of the table.

Given:

Number of friends=8

Name:Janak, Kuldeep, Punit, Kavita, Naveen, Azad, Vikas and Anil.

Explanation:

• Four of them are sitting at the four corners and the rest four are sitting at the middle of each of the four sides of the table.

• The ones who sit at the corners face the center, while those who are sitting in the middle of the sides face away opposite to the center of the table.

• So, the representation will be as follows:

• Janak faces the centre and is third to the right of Azad.

• Naveen faces the center but is not an immediate neighbour of Azad.

• Kavita is sitting second to the right of Kuldeep. Kuldeep faces the centre.

• Punit is not an immediate neighbour of Janak.
• Only one person is sitting between Azad and Vikas.
The above representation is the final arrangement.
• So, Kuldeep sits third right to Punit. Option 1 is false.
• Punit is an immediate neighbour of Naveen and Kavita. Options 2 and 3 are discarded.
• Punit faces away from the centre of the table
Hence, "Punit faces away from the centre of the table" is the correct answer.

Q27. Answer: (b) 117

LOGIC: The difference between the numbers is Prime numbers from 11 to 29.
Hence, 117 is the correct answer.

Q28. Answer: (d) 2880

Given :
The train takes 8 hours less if its speed is increased by 12 km/h.
The train takes 12 hours more if its speed decreased by 12 km/h.
Formula used :
Speed × time = distance
Calculations :
Let the speed of the train be x km/h and the time taken be y h.
The total distance is then xy km.
Case 1:
Speed increases by 12 km/h and the time taken is reduced by 8 hours.
The distance traveled remains xy km.
(x + 12) (y − 8) = xy
=> xy − 8x + 12y − 96 = xy
=> − 8x + 12y − 96 = 0
=> − 2x + 3y = 24 ----(1)
Case 2:
Speed decreases by 12 km/h, then the time taken increases by 12 hours.
However, the distance remains xy km.
(x − 12) (y + 12) = xy
()=> xy + 12x − 12y − 144 =xy
=> 12x − 12y − 144 = 0
=> x − y = 12 ----(2)
From equation (1) & (2) :
=> x = 60 km/h
Using this in (2), we get
=> 60 − y = 12
=> y = 48
Therefore The distance is 60 × 48 = 2880 km.

Q29. Answer: (c) The currency issued by the Central Bank that can be held by the public or by the commercial banks.

The correct answer is The currency issued by the Central Bank that can be held by the public or by the commercial banks.
Key Points
• High-powered money is the liability of the monetary authority of the country.
• This is also called the monetary base and is created by the RBI.
• High-powered money includes currency (notes and coins), deposits with the government, and reserves of commercial banks with RBI. So, to sum up, high-powered money is. H = C + R

• The other name of the Reserve Money is “High Powered Money” and also “Monetary Base”.

Additional Information

• There are 4 major types of Money :

• Commodity Money

• Fiat Money.

• Fiduciary Money.

• Commercial Bank Money.

Q30. Answer: (a) 41918722

The positional value of English alphabet is as follows:

'GREEN' is written as '209222213'

'BLUE' is written as '2515622'

Similarly,

Hence,"41918722" is the correct answer.

Q31. Answer: (a) Article 17

The correct answer is Article 17.

Key Points

• Article 17 of the Indian constitution mainly deals with the account of untouchability. This article puts restrictions and prohibits the practice of untouchability. It ensures that untouchability is eradicated in all forms. Any kind of disability that is arising out of untouchability is considered an offence.

• Article 17 of the Indian Constitution eliminates the practice of untouchability.

• This Act was passed in the Indian Parliament for the eradication of all sorts of untouchability from the country

• The punishment imposed in this act is a 6-month-imprisonment or a fine of Rs.500 for any person convicted of carrying out the disabilities of untouchability on anyone else in case of his first offence.

• In the case of subsequent and repeated offences, the convicted person will be sentenced to a jail term along with a fine. There is a provision for increasing the punishment also if needed.

• The Act was introduced in the Lok Sabha on 8th May 1955 and passed in both houses and came into force on 1st June 1955.

• The Act was revised on September 2nd, 1976, and renamed Protection of the Civil Rights Act. This Act had even severe measures to eradicate untouchability.

Additional Information

• Article 19 says Everyone has the right to freedom of opinion and expression; this right includes the freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

• Article 16 in The Constitution Of India 1949. Equality of opportunity in matters of public employment.

• Article 18(1) abolishes all titles. It prohibits the State to confer titles on anybody whether a citizen or a non-citizen. Military and academic distinctions are, however, exempted from the prohibition.

Q32. Answer: (d) 24

Given:

2.98 of 5 + 1.96 of 5 - 4 ÷ 2 + 0.98 = ?

Concept:

In approx value:

2.98 = 3

1.96 = 2

0.98 = 1

Calculation:

Now, according to the question,

3 × 5 + 2 × 5 - 4 ÷ 2 + 1

=> 3 × 5 + 2 × 5 - 4 × 1over2 + 1

=> 15 + 10 - 2 + 1

=> 25 - 2 + 1

=> 23 + 1 = 24

Therefore The simplified value of the given equation is 24.

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Q33. Answer: (a) UNCTAD

The correct answer is UNCTAD.

Key Points

• Its full name is United Nations Conference on Trade and Development.
• It was established in 1964.
• It is an intergovernmental organization intended to promote the interests of developing states in world trade.
• UNCTAD is part of the United Nations Secretariat dealing with trade, investment, and development issues.
• The General Assembly in the sphere of trade and development.
• Its purpose is the promotion of trade and development, particularly in developing countries.

Additional Information

• UNISDR stands for United Nations International Strategy for Disaster Reduction.
• UNICEF, in full originally called the United Nations International Children's Emergency Fund.
• UNHRC stands for United Nations Human Rights Council.

Q34. Answer: (c) Sister

According to the given information:

1) Guava is the only brother of Grape's father.
2) Mango is the mother of Apple.
3) Apple is the brother of Kiwi.
4) The wife of Apple's maternal grandfather is also the paternal grandmother of Grape.

Clearly, we can see that Mango is the sister of Gauva.

Hence, the correct answer is "Sister".

Q35. Answer: (b) Box B

Given:

• Number of boxes = 5, namely A, B, C, D and E.
• Boxes are kept in vertical arrangement.
• The topmmost box is numbered 1 and the bottommost is 5.

Explanation:

• Only one box is kept below box C.

Sr. No.	Name of the box
1(topmost)	
2	
3	
4	C
5(bottom)	

• There are two boxes kept between boxes D and C.

Sr. No.	Name of the box
1(topmost)	D
2	
3	
4	C
5(bottom)	

• Box E is kept at the second place from the top.
• | Sr. No. | Name of the box |

1(topmost)	D
2	E

3	
4	C
5(bottom)	

• Only two boxes are kept above box A.

• | Sr. No. | Name of the box |

1(topmost)	**D**
2	E
3	A
4	C
5(bottom)	B

• So, Box B is placed at the bottom.

Hence, Box B is the correct answer.

Q36. Answer: (b) Alt + Tab

The correct answer is Alt + Tab.

Key Points

• A popular Windows shortcut key is Alt + Tab, which allows you to switch between all of your open programs.

• While continuing to hold down the Alt key, choose the program you want to open by clicking Tab until the correct application is highlighted, then release both keys.

• You can also Select the Task View icon on the taskbar.

Additional Information

• Ctrl+N is a keyboard shortcut most often used to create a new document, window, workbook, or another type of file.

• Ctrl+Tab is a keyboard shortcut most often used to switch between open tabs in a browser.

• In Microsoft PowerPoint, the Alt + N keyboard shortcut opens the Insert tab in the Ribbon.

Q37. Answer: (c) 475 m

Given:

Speed (S) of the train = 95 km/h

Time (T) taken to cross the post = 18 s

Formula used:

S = D/T

Concept used:

Convert the speed of the train from km/h to m/s

S = 95 × 1000/3600 = 95 × 5/18 = 475/18 m/s

Calculation:

According to the question,

475/18 = D/18

=> D = 475/18 × 18

=> D = 475 m

Therefore The length of the train is 475 m.

• Assume the train is stationary and the post is moving at a speed of 95 km/h and the length of the train is the distance travelled by the post.

Q38. Answer: (d) FUGNY

Now,

• 'NEWTON' is written as 'LUCFKL'.

• • 'PASCAL' is written as 'JYGWYN'.

• • Similarly, for TESLA:

• So, TESLA is written as FUGNY.

Hence, FUGNY is the correct answer.

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Q39. Answer: (b) ICLUSLGSNG

Given: SLU_ _ INGS _ _ ICING _ _UICIN_ _LUICI_ _

Explanation:

Lets check each option.

1) S,L,I,C,L,U,G,N,G,L → SLUSLING - SICICING - LUUICING - NLUICIGL

No pattern is followed.

2) I,C,L,U,S,L,G,S,N,G → SLUICING - SLUICING - SLUICING - SLUICING

SLUICING is repeating itself.

3) L,I,C,U,S,L,G,L,G,N → SLULIING - SCUICING - SLUICING - LLUICIGN

No pattern is followed.

4) S,G,C,L,U,S,N,G,S,L → SLUSGING - SCLICING - USUICINN - GLUICISL

No pattern is followed.

Hence, "ICLUSLGSNG" is the correct answer.

Q40. Answer: (c) Thursday

Given: It is Wednesday on 5th August 1994.

To find: which day of the week will be on 2nd September 1995.

Explanation:

Neither 1994 nor 1995 is a leap year.

Therefore 5th August 1995 will be a Thursday because 5th August 1994 + 365 days or 1 odd day = 5th August 1995.

No. of odd days from 5th August 1995 to 2nd September 1995 = 26 days (Aug 1995) + 2 days (Sep 1995) = 28 days = 0 odd day

Therefore 5th August 1994 + 1 odd day + 0 odd day = 2nd September 1995

Therefore Wednesday + 1 odd day = 2nd September 1995.

Therefore Thursday = 2nd September 1995.

Hence, Thursday is the correct answer.

Q41. Answer: (d) 16 ÷ 20 - 6 + 10 × 12 = 16

Given:× stands for subtraction, ÷ stands for addition, + stands for division, and - stands for multiplication.

Symbol	**×**	**÷**	**•**	**•**
Meaning	•	•	÷	×

Explanation:

• Option1:

• 45 - 15 ÷ 15 × 60 + 16 = 42 will be written as

• 45 × 15 + 15 - 60 ÷ 16 = 42

• 675 + 15 -15/4 = 42

• As this contains a fractional value, so the option is discarded.

• Option 2:

• 25 + 5 × 20 ÷ 5 - 16 = 6 will be written as

• 25 ÷ 5 - 20 + 5 × 16 = 6

• 5 - 20 + 80 = 16

• 65 = 16 (false)

• Option 3:

• 9 ÷ 28 - 10 × 15 + 9 = 10 will be written as

• 9 + 28 × 10 - 15 ÷ 9 = 10

• 9 + 280 - 5/3 = 10

• As this contains a fractional value, so the option is discarded.

• Option 4:

• 16 ÷ 20 - 6 + 10 × 12 = 16

• 16 + 20 × 6 ÷ 10 - 12 = 16

• 16 + 12 - 12 = 16

• 16 = 16 (both sides are equal)

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Hence, 16 ÷ 20 - 6 + 10 × 12 = 16 is the correct answer.

Q42. Answer: (d) Ohm

The correct answer is Ohm.

Key Points

• Electrical Resistance

• A measurement of an object's resistance to the flow of electrical current is called its electrical resistance.

• An object's resistance is mostly determined by the substance from which it is formed; for example, rubber-manufactured items typically have very high resistance and low conductivity.

• The ratio of the voltage (V) applied across an object to the current (I) flowing through it is known as its resistance (R).

• Ohm (Ω) is the SI unit of electrical resistance.

• A conductor's electrical resistance depends on the following factors:

• Size of the conductor

• The cross-sectional area of the wire

• Composition of the conductor and

• Temperature

Additional Information

SI unit	Quantity
Watt (W)	• Unit of power - 1 W = 1.00 joules per second (J/sec) - It is named after James Watt - Power is defined as the amount of energy transferred per unit of time.
Coulomb (C)	• Unit of electrical charge - Named after Charles-Augustin de Coulomb, a French scientist. - One coulomb is equal to one ampere (A) of current flowing for one second (s).
Newton (N)	• Unit of force - Named after Issac Newton - One Newton is the force that, when applied to a body of mass 1 kg, will give an acceleration of 1ms-2

Q43. Answer: (d) Isoquant

The correct answer is Isoquant,

Key Points

• An isoquant in economics is a curve that, when plotted on a graph, shows all the combinations of two factors that produce a given output.

• Often used in manufacturing, with capital and labour as the two factors, isoquants can show the optimal combination of inputs that will produce the maximum output at minimum cost.

• An isoquant is also called an equal product curve or production indifference curve or constant product curve.

• Isoquant curve shows combinations of inputs employable to produce a certain output.

Additional Information

• Elasticity is an economic concept used to measure the change in the aggregate quantity demanded of a good or service in relation to price movements of that good or service.

• A product is considered to be elastic if the quantity demand of the product changes more than proportionally when its price increases or decreases.

• The long run refers to a period of time where all factors of production and costs are variable.

• Over the long run, a firm will search for the production technology that allows it to produce the desired level of output at the lowest cost.

• A duopoly exists when two companies dominate a market for a given product or service.

• A duopoly can have the same impact on the market as a monopoly if the two players collude on prices or output.

Q44. Answer: (a) Greek

The correct answer is Greek.

Key Points

• Megasthenes

• Greek historian, diplomat, and explorer Megasthenes lived in the Hellenistic era (350–290 B.C.).

• Megasthenes has been sent as an ambassador to Chandragupta Maurya's court by Seleucus I Nicator, the Greek conqueror of

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West Asia.

• India is described in the book "Indica" by Megasthenes.

• The term "father of Indian history" refers to Megasthenes because he was the first to depict ancient India.

• The two main rivers Sindhu and Ganga are also described by him.

• The Mauryan capital Pataliputra was visited by Megasthenes.

• He gives a thorough description of the rivers of the Punjab region in northwest India.

Additional Information

• Chandragupta Maurya

• Chandragupta Maurya became king when he was 25 years old.

• He defeated the Nandas and established the Mauryan Empire.

• In 322 BC, he defeated the final Nanda emperor Dhanananda and took control of Pataliputra.

• A wise man by the name of Chanakya/Kautilya supported Chandragupta Maurya.

• Seleucus Nicator was defeated by Chandragupta Maurya in 305 BC.

• During Chandragupta Maurya's rule, all of northern India was united.

Q45. Answer: (b) Formula bar

The correct answer is Formula bar.

Key Points

• Formula Bar

• In an Excel worksheet, the content of the active cell is displayed in the formula bar.

• Excel's formula bar is a unique toolbar located at the top of the worksheet window that is marked with a function symbol (fx).

• It can be used to display numerous lines for a single formula and is used to edit the content of any cell.

• When working with a lengthy formula, the formula bar is really helpful since it allows us to examine the whole formula without covering the contents of the adjacent cells.

• The equal sign in any cell or a click anywhere in the formula bar activates the bar.

Additional Information

• Name Box

• The Name Box in Excel refers to the input box located immediately to the left of the formula bar.

• The address of the worksheet's "active cell" is often shown in the Name Box.

• Title Bar

• The title bar is located above or next to the quick access toolbar in the excel window.

• It includes the close, minimise, and maximise buttons as well as the window's title.

• Status Bar

• The lower edge of the worksheet window, which shows different data about an Excel worksheet, is known as the status bar.

• The sum, count, and average of the currently selected cells can be displayed in the status bar.

Q46. Answer: (d) 58

Given:

AB = 16 cm.

RC = 3 cm

DS = 10 cm

Formula used:

The perimeter of a quadrilateral = (Sum of all the sides)

Concept used:

Tangent to a point from a circle are equal then AS = AP and BP = BQ

Calculations:

According to the question,

=> AB = AP + BP,

AS = BQ then, AS + BQ = 16 (8 + 8)

=> RC = CQ then, RC = 3 & CQ = 3

=> DS = RD then, DS = 10 & RD = 10

Therefore Perimeter of the quadrilateral

=> AB + (AS + BQ) + QC + RC + RD + DS

=> 16 + 16 + 3 + 3 + 10 + 10 = 58.

Therefore The perimeter of the quadrilateral is 58 cm.

Q47. Answer: (d) 30 m due East

Given: The starting point of Aditya is given and directions in which he moves to reach an ATM are given. We have to find the shortest distance to the ATM.

Condition applied: All the turns are 90° only.

Explanation:

• The starting point is a juice corner.

• Aditya, looking for ATM, walked 20 m due North from the starting point.

• He turned right and walked 18 m. He again turned right and walked 20 m.

• Then he finally turned left and walked 12 m to reach the ATM.

Therefore, the shortest distance between ATM and juice corner is 30m (18m +12m) and ATM is in East direction from his starting point.

Hence, 30m due East is the correct answer.

Q48. Answer: (b) 972π cm2

Shortcut Trick

Let the radius of the large sphere be R and the small sphere be r.

Volume is proportional to r^3. Since 27 spheres are made: $R^3 = 27 \times r^3 \Rightarrow R = 3r$.

Surface area is proportional to r^2. Ratio of SA_(large) to SA_(small) = $R^2 : r^2 = 9 : 1$.

Total Surface Area of 27 spheres = 27 × SA_(small) = 27 × (SA_(large) ÷ 9) = 3 × SA_(large).

From Volume = $972\pi = (4/3)\pi R^3 \Rightarrow R = 9$ cm. SA_(large) = $4\pi(9)^2 = 324\pi$. Total SA = $3 \times 324\pi = 972\pi$ cm^2.

Therefore The correct answer is 972π cm^2.

Alternate Method

Given: Volume of large sphere = 972π cm^3, Number of small spheres = 27.

Formula Used: Volume of sphere = $(4/3)\pi r^3$; Surface Area = $4\pi r^2$.

=> $(4/3) \times \pi \times R^3 = 972\pi$

=> $R^3 = (972 \times 3) \div 4 = 243 \times 3 = 729$

=> R = 9 cm

=> Volume of one small sphere = $972\pi \div 27 = 36\pi$ cm^3

=> $(4/3) \times \pi \times r^3 = 36\pi \Rightarrow r^3 = 27 \Rightarrow r = 3$ cm

=> Total Surface Area = $27 \times (4 \times \pi \times r^2)$

=> Total Surface Area = $27 \times 4 \times \pi \times 3^2 = 27 \times 36\pi = 972\pi$ cm^2

Therefore The correct answer is 972π cm^2.

Additional Information

Volume and Radius Relation

When a solid is melted and recast into n smaller identical solids, Total Volume remains constant: V_(large) = n × V_(small).

Surface Area of Sphere

The surface area of a sphere with radius r is $4\pi r^2$. For a hemisphere, curved surface area is $2\pi r^2$ and total surface area is $3\pi r^2$.

Scale Factor Property

If the ratio of radii is 1:k, the ratio of their surface areas is $1:k^2$ and the ratio of their volumes is $1:k^3$.

Q49. Answer: (a) 6.25%

Given:

Simple Interest (SI) = 13/8 × Principle

Time period (T) = 10 years

Formula used:

SI = (P × R × T)/100

Calculation:

According to the question,

Let the sum of money that's principal be x

Amount after 10 years becomes = 13x/8

=> SI = Amount - P = 13x/8 − x = 5x/8

=> Rate per annum = (SI × 100)/(P × T)

=> R = (5x/8 × 100)/(x × 10)

=> R = 500/80 = 6.25% per annum.

Therefore The rating percentage of the interest will be 6.25%.

Q50. Answer: (c) wooden

The correct answer is wooden.

Key Points

• Kanjira

• The frame drum known as the kanjira (Khanjari) originates from South India and belongs to the tambourine family.

• It consists of a skin (usually iguana) stretched and pasted on a circular wooden frame.

• In the side of the frame, there are frequently three or four slots where bell-metal jingle discs are hung from metal crossbars.

• The khanjari and kanjani of North and East India and Nepal are related to the term kanjira.

• Wetting the skin allows the kanjira to be tuned to different pitches.

• The right hand's fingers are used to beat it while it is being held at the bottom of the frame by the left hand, which also adjusts the skin's tension.

Additional Information

• This instrument has a monitor lizard skin drumhead covering one side and is left open on the other.

• It has been used for many years in India as a folk and bhajan instrument.

• Manpoondia Pillai is credited with the invention of the modern form of the kanjira as well as the instrument's introduction into South Indian Carnatic music.

• Kanjira is known as Khaijadi in Nepal.

• In addition to the Khaijadi, the Daanf, Damphu, and Hring tambourines are also played in Nepal.

Q51. Answer: (d) Pacific Ocean

The correct answer is the Pacific Ocean.

Key Points

• El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern equatorial Pacific Ocean.

• Trade winds and the atmosphere are also impacted by El Niño.

• El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean.

• El Nino, meaning "Child Christ" is a warm ocean current appearing along the Peru coast, generally in December.

• It normally happens once every 4-5 years though it is not fixed.

• It replaces the cold Peru Ocean current flowing along the Peru coast in normal years.

Additional Information

• East Greenland current and the Labrador current flow from the Arctic Ocean into the Atlantic Ocean.

• The Labrador current flows along part of the east coast of Canada and meets the warm Gulf Stream.

• The Indian Ocean gyre is composed of two major currents: the South Equatorial Current, and the West Australian Current.

Q52. Answer: (d) R

Friends: K, L, M, N, O, P, Q, R and S (South facing)

Important Points

• Because the friends are facing South, when we say that L is to the left of M, it will be placed at the right in the diagram.

1) K is sitting at one end of the row.

Case 1:

Case 2:

2) O is sitting at the third place to the left of K. (So case 1 is eliminated)

3) There are only five people sitting to the right of M.

4) L is sitting to the immediate right of M.

5) M at the second place to the right of N.

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6) Only Q is seated between P and O.

7) S is sitting to the immediate left of N.

Hence, R is sitting to the immediate left of M.

Q53. Answer: (d) D

Given:

• Number of floors: 7 such that The floors were numbered 1 to 7 from bottom to top, floor 1 being the ground floor.

• Number of men: 7; A, B, C, D, E, F, and G

Explanation:

• G occupied floor number 4.

• C was exactly below G.

• F occupied the topmost floor.

Number of floor	Name of man
7(topmost)	F
6	
5	
4	G
3	C
2	
1(ground floor)	

• Only one person lived below the floor occupied by E.

Number of floor	Name of man
7	F
6	
5	
4	G
3	C
2	E
1	

• B was exactly above A.

Number of floor	Name of man
7	F
6	B
5	A
4	G
3	C
2	E
1	D

Thus D lives on floor number 1.

Hence, D is the correct answer.

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Q54. Answer: (b) 56 cm

Given:

Area of rectangle = 180 cm²

Ratio of length (l) and breadth (b) = 9/5

Formula used:

Perimeter of a Rectangle (P) = 2 × (l + b)

Area of a Rectangle = l × b.

Calculations:

According to the question,

l/b = 9/5

=> l = 9b/5

Area of rectangle = l × b

=> 180 = (9b/5) × b

=> 900 = 9b²

=> b = √100 = 10 cm

Then, length = (9 × 10)/5 = 18 cm

The perimeter of the rectangle:

=> P = 2 × (l + b) = 2 × (18 + 10)

=> P = 2 × (28) = 56 cm

Therefore The Perimeter of the Rectangle is 56 cm.

Q55. Answer: (d) both numbers are prime numbers

Given:

The HCF of two different numbers is always 1

Concept Used:

The HCF of two consecutive numbers is always one because the two consecutive numbers do not have any common factor other than 1.

Prime numbers only divide by themselves, the only common factor that can be obtained is 1.

Therefore The HCF of two different numbers is always 1 when both numbers are prime numbers.

Q56. Answer: (b) 12.5%

Given:

Simple Interest (SI) = 2 × Principle (P)

Time period (T) = 8 years

Formula used:

=> SI = (P × R × T)/100

SI = Amount - P

Calculation:

According to the question,

Let the sum of money that's principal be x

Amount after 8 years becomes double = 2x

=> SI = Amount - P = 2x − x = x

=> Rate per annum = (SI × 100)/(P × T)

=> R = (x × 100)/(x × 8)

=> R = 100/8 = 12.5% per annum.

Therefore The rating percentage of the interest will be 12.5%.

Q57. Answer: (d) 12 cm

Given:

Spheres of radius r1 = 6 cm, r2 = 8 cm, r3 = 10 cm molten in single one.

Formula used:

The volume of Sphere = 4/3π r³

Calculations:

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Let the Radius of the larger bead be 'R'

According to the question,

The volume of smaller beads = Volume of the larger bead

=> 4/3π [(6)³ + (8)³ + (10)³] = 4/3π R³

=> R³ = [(216) + (512) + (1000)]

=> R³ = 1728 = 12 cm.

Therefore The radius (in cm) of the larger bead will be 12 cm.

Q58. Answer: (a) International Federation of Film Archives (FIAF) award

The correct answer is the International Federation of Film Archives (FIAF) award.

Key Points

• Bollywood actor Amitabh Bachchan was honoured with the International Federation of Film Archives (FIAF) Award 2021.

• The virtual ceremony was held on March 19. Bachchan shared a heartwarming message after he received the award.

• In the lengthy message, the 'Chehre' actor also, as they conferred the award.

• Amitabh is the first Indian to receive the award for his contribution to the preservation of and access to the world`s film heritage for the benefit of present and future generations.

Additional InformationFIAF Award

• Once a year, FIAF celebrates a film personality whose experience and personal commitment in the field of cinema underlines the missions of the Federation, by presenting them with a FIAF Award.

• The FIAF Award recognizes in particular, their dedication and contribution to the preservation of, and access to, the world film heritage, for the pleasure of today’s audiences, as well as for the benefit of future generations.

• The FIAF Award is usually presented at an official ceremony organized during one of the major film festivals or, if relevant, a FIAF Congress.

• The trophy itself is a silver film can be made by Talleres de los Ballesteros in Mexico, with the help of the Filmoteca de la UNAM.

Q59. Answer: (d) 24

Given:

x(x + y + z) = 30 -----(1)

y(x + y + z) = 64 -----(2)

z(x + y + z) = 50 -----(3)

Where x, y, z > 0.

Calculation:

By adding the equations (1), (2), and (3) we get

[x (x + y + z)] + [y (x + y + z)] + [z (x + y + z)] = 144

Taking (x + y + z) common,

=> (x + y + z) (x + y + z) = 144

=> (x + y + z)² = 144

=> (x + y + z) = 12

Multiplying 2 on both sides,

=> 2 (x + y + z) = 24

Therefore The value of 2(x + y + z) is 24.

Q60. Answer: (c) 45°

Shortcut Trick

Given equation: $\sin^2\beta - \sin 30° = 0$

=> $\sin^2\beta = \sin 30°$

Using standard value $\sin 30° = 1/2$:

=> $\sin^2\beta = 1/2$ => $\sin \beta = 1/\sqrt{2}$

For an acute angle, $\sin \beta = 1/\sqrt{2}$ implies $\beta = 45°$.

Therefore The correct answer is 45°.

Alternate Method

Given: $\sin^2\beta - \sin 30° = 0$ where β is an acute angle.

Formula Used: $\sin 30° = 1/2$; $\sin 45° = 1/\sqrt{2}$

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Calculations:
=> $\sin^2\beta - \sin 30° = 0$
=> $\sin^2\beta = \sin 30°$
=> $\sin^2\beta = 1/2$
=> $\sin \beta = \sqrt{(1/2)}$
=> $\sin \beta = 1/\sqrt{2}$
=> β = sin^(−1)(1/√2)
=> β = 45°
Therefore The correct answer is 45°.
Additional Information
Trigonometric Values of Sine
sin 0° = 0, sin 30° = 1/2, sin 45° = 1/√2, sin 60° = √3/2, sin 90° = 1.
Acute Angle
An acute angle is an angle that is greater than 0° and less than 90°.
Fundamental Identity
For any angle θ, $\sin^2\theta + \cos^2\theta = 1$.

Q61. Answer: (c) 36

Shortcut Trick
Ratio of sides = 4 : 3
Ratio of areas = $4^2 : 3^2 = 16 : 9$
Sum of area units = 16 + 9 = 25 units → 225 cm²
1 unit = 9 cm² => Side unit = √9 = 3 cm
Side of smaller square = 3 × 3 = 9 cm
Perimeter = 4 × 9 = 36 cm
Therefore The correct answer is 36 cm.
Alternate Method
Given: Ratio of sides = 4 : 3, Sum of areas = 225 cm²
Formula Used: Area of square = $(\text{side})^2$; Perimeter = 4 × side
=> Let the sides be 4x and 3x.
=> $(4x)^2 + (3x)^2 = 225$
=> $16x^2 + 9x^2 = 225$
=> $25x^2 = 225$
=> $x^2 = 9$
=> x = 3
=> Side of smaller square = 3x = 3 × 3 = 9 cm
=> Perimeter = 4 × 9 = 36 cm
Therefore The correct answer is 36 cm.
Additional Information
Square Properties
A square has all sides equal. Area = a^2, Perimeter = 4a, and Diagonal = a√2.
Ratio of Areas
If the ratio of sides of two similar figures is a : b, then the ratio of their areas is $a^2 : b^2$.
Diagonal Relation
Area of a square can also be calculated using the diagonal (d) as Area = $d^2 \div 2$.

Q62. Answer: (d) Sun God

The correct answer is Sun God.
Key PointsPongal
• Pongal is a harvest festival celebrated by the Tamil community.
• It is a celebration to thank the Sun, Mother Nature and the various farm animals that help to contribute to a bountiful harvest.
• Celebrated over four days, Pongal also marks the beginning of the Tamil month called Thai, which is considered an auspicious

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month.

• It usually falls on the 14th or 15th of January each year.

• Pongal is also the name of the dish made and eaten during this festival. It is a mixture of boiled sweet rice.

• It is derived from the Tamil word pongu, which means “to boil over”.

Additional Information

• Vasant Panchami, also called Saraswati Puja in honor of the Hindu goddess Saraswati.

• It is a festival that marks the preparation for the arrival of spring.

• The festival is celebrated by people of Dharmic religions in the Indian subcontinent and Nepal in different ways depending on the region.

• A festival essentially dedicated to the fire and the sun God, Lohri is associated with the concept of life and health in the Hindu religion.

• Ganga Dussehra is one of the major festivals observed in India in the honor of Goddess Ganga.

• It is celebrated on the tenth day of the Shukla Paksha (waxing Moon) of the Jyestha month, as per the Hindu calendar

Q63. Answer: (a) Only conclusion I follows

Statements:

1. Some professors are doctors.

2. No doctor is a researcher.

Possible Venn Diagram:

Conclusions:

I. Some professors are not researchers → True (Since some professors are doctors and no doctor is a researcher)

II. All professors are researchers → False (It is not possible)

Hence, only conclusion I follows.

Q64. Answer: (b) ZXYYZZXY

Option 2 is the correct answer.

Given: XY_XY_ _ZXYX_ _XYXY_ _ _

Lets check each option.

1) Y,X,Y,Y,Z,Z,X,Y → XYYXY - XYZXY - XYZXY - XYZXY

• No pattern followed.

2) Z,X,Y,Y,Z,Z,X,Y → XYZXY - XYZXY - XYZXY - XYZXY

• XYZXY is repeating itself.

3) Z,X,Y,Y,Z,Z,X,Z → XYZXY - XYZXY - XYZXY - XYZXZ

• No pattern followed.

4) Z,Y,Y,Y,Z,Z,X,Y → XYZXY - YYZXY - XYZXY - XYZXY

• No pattern followed.

Hence, "ZXYYZZXY" is the correct answer.

Q65. Answer: (c) 144 km

Given:

Distance traveled by Train (D1) = (5/12)x km

Distance traveled by Bus (D2) = (1/3)x km

Distance traveled by Bicycle (D3) = 36 km

Calculations:

According to the question,

Let the total distance traveled be 'x'.

=> x = (D1) + (D2) + (D3)

=> x = (5/12)x + (1/3)x + 36

=> x = (5x + 4x)/12 + 36

=> x = 9x/12 + 36

=> x = 3x/4 + 36

=> x - (3x/4) = 36

=> 1x/4 = 36

=> x = 36 × 4 = 144 km

Therefore The total distance traveled is 144 km.

Q66. Answer: (d) 270

Given:

7/18 of the balls in the drum were red

8/15 of the balls in the drum were blue

Concept:

No. of red balls = No. of yellow balls + 84

Calculations:

Let the number of the balls be X.

Now, No. of red balls = (7/18 X)

And, No. of blue balls = (8/15 X)

Therefore, No. of yellow balls

= X - { 7/18 X + 8/15 X }

= 7/90 X

According to question,

No. of red balls = No. of yellow balls + 84

=> 7/18 X = 7/90 X + 84

=> 28/90 X = 84

=> X = 270

Hence, total no. of balls = X = 270.

Q67. Answer: (d) -35.111

Given:

0.002 + 5.025 - 35.08 - 5.058

Calculations:

0.002 + 5.025 - 35.08 - 5.058

=> 5.027 - 35.08 - 5.058

=> (- 0.031) - 35.08 = - 35.111

Therefore The simplified value is - 35.111

Q68. Answer: (a) 1236 CE

The correct answer is 1236 CE.

Key Points

• Sultan Raziyyat-Ud-Dunya Wa Ud-Din, popularly known as Razia Sultana, was a ruler of the Delhi Sultanate in the northern part of the Indian subcontinent.

• She was the first female Muslim ruler of the subcontinent and the only female Muslim ruler of Delhi.

• In 1236 CE, the daughter of Sultan Iltutmish became the sultan of Delhi.

• The writer Minhaj-i-Siraj recognized that she was capable. But he could not accept a woman as his ruler.

Additional Information

• Razia Sultan was very wise, an excellent administrator, brave and a warrior like her father.

• In spite of the fact that her rule was only for the time of three years, her deeds have been saved in the pages of history.

• Razia Sultan's Tomb in Delhi is one of those spots, which recollects the memory of this courageous woman.

• She dressed like a man and sat in an open durbar.

• She was an effective ruler and had the characteristics of a monarch.

Q69. Answer: (c) 10 January 1942

The correct answer is 10 January 1942.

Key Points

• The WPI indices are used for the purpose of escalation clauses in the supply of raw materials, machinery and construction work.

• The Office of the Economic Adviser in the Department of Industrial Policy and Promotion, Ministry of Commerce & Industry is responsible for compiling WPI and releasing it.

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• The first index number of wholesale prices commenced in India for the week of January 10, 1942.

Additional InformationWholesale price index

• A wholesale price index (WPI) measures changes in the overall price of goods before they are sold at retail.

• This includes the prices charged by manufacturers and, often outside the U.S., wholesalers.

• Usually expressed in terms of the percentage change from the prior month or a year earlier, the WPI is an inflation indicator.

• In the U.S., the WPI has been reported as the Producer Price Index (PPI) since 1978.

Q70. Answer: (b) Director General of the National Investigation Agency

The correct answer is Director General of the National Investigation Agency.

Key Points

• CRPF Chief Kuldiep Singh has been given the additional charge of the Director General of the National Investigation Agency (NIA) to replace Y C Modi.

• Modi was a 1984-batch IPS officer of the Assam-Meghalaya cadre.

• He was appointed as the chief of the federal anti-terror probe agency in September 2017.

• Consequent to the superannuation of Y C Modi, DG, NIA, on May 31, 2021, the competent authority has approved that Kuldiep Singh shall hold additional charge of the post of DG, NIA.

• He should hold the charge till the appointment and joining of the successor or until further orders.

Additional Information

• Currently, Dinkar Gupta serves as the Director-General of the National Investigation Agency since 28 June 2022.

• The NIA (National Investigation Agency) can investigate terror cases across the country without having to get permission from the states.

• The agency investigates terror offenses, waging war against the country, offenses on nuclear facilities, etc.

• It came into force after Parliament passed the National Investigation Agency Act 2008.

Q71. Answer: (c) Narmada

The correct answer is Narmada.

Key Points

• Ahilya Fort is in the central Indian town of Maheshwar.

• It sits high above the sacred river Narmada.

• Maharani Ahilyabai Holkar ruled here from 1765 to 1796 and built Ahilya Wada. Later its name became the "Ahilya fort".

• Inside this fort was her personal residences, offices, and barbara audience hall.

Additional Information

• Ahilya Fort or palace sits on top of the 16th CE ramparts that were potentially built by the Mughals.

• The palace is now a heritage hotel which means the residential part is open only to the guests staying here.

• The Ahilya Fort Hotel has 19 rooms of character, set in six buildings of the 18th century, with modern amenities and comforts.

• Guests stroll through 3 acres of courtyards, fountains, and gardens that link areas within the Wada.

Q72. Answer: (b) Lieutenant Shivangi Singh

The correct answer is Lieutenant Shivangi Singh.

Key PointsLieutenant Shivangi Singh

• India's first woman Rafale fighter jet pilot Shivangi Singh was a part of the Indian Air Force (IAF) tableau at the Republic Day parade 2022.

• Shivangi Singh is only the second woman fighter pilot to be a part of the IAF's Republic Day tableau.

• Last year Flight Lieutenant Bhawna Kanth was a part of the IAF Republic Day tableau.

• She became the first female fighter pilot to feature on the IAF Republic Day tableau.

Additional InformationIAF's Republic Day tableau on 26th January 2022

• The Indian Air Force (IAF) tableau participated in the Republic Day Parde 2022.

• The theme of the tableau was 'Indian Air Force Transforming For The Future'.

• It showcased scaled-down models of MiG-21, Gnat, Light Combat Helicopter (LCH), Aslesha radar and Rafale aircraft.

Q73. Answer: (d) Wednesday

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	4	4	0	2	5	0	3	6	1	4	6

Date: June 10, 1992

Steps to find the day of the week:

Last two digit of year	**92**
No. of leap year (divisor)	92 ÷ 4 Divisor = 23
Code of the month	5
Date	10

Total = (92 + 23 + 5 + 10) = 130

And 130 ÷ 7, we get 4 as the remainder.

Code	**Day**
1	Sunday
2	Monday
3	Tuesday
4	Wednesday
5	Thursday
6	Friday
0	Saturday

Hence, "Wednesday" is the correct answer.

Q74. Answer: (d) 144π cm3

Given:

The total surface area of the hemisphere = 108π cm^2

Formula used:

The total surface area of the hemisphere = $3\pi r^2$

The volume of hemisphere = $(2/3)\pi r^3$

Where r is the radius of the hemisphere!

Calculation:

According to the question,

The total surface area of the hemisphere = 108π

=> $3\pi r^2 = 108\pi$

=> $r^2 = 36$

=> r = 6

Volume of the hemisphere (V) = $(2/3) \times \pi r^3$

$V = (2/3) \times \pi \times (6)^3$

=> $V = (2/3) \times \pi \times 216$

=> $V = 432/3 \times \pi = 144\pi$ cm^3.

Therefore The volume of the hemisphere is 144π cm3.

Q75. Answer: (c) 8, 82

Explanation:

• Option1: $(19)^2 + 14 = 361 + 14 = 375$

• Option 2: $(17)^2 + 14 = 289 + 14 = 303$

• Option 3: $(8)^2 + 14 = 64 + 14 = 78$, and not 82

• Option 4: $(24)^2 + 14 = 576 + 14 = 590$

So, (8, 82) does not belong to the group.

Hence, 8, 82 is the correct answer.

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Q76. Answer: (d) Only assumption I is implicit.

Given: If you do not work hard, I will fire you."- A statement by the Head of Department to a junior.

Implicit means that understood though not put clearly into words

Explanation: Assumption II talks about all juniors but information about other juniors is not implicit in the statement.

Assumption I directly follows the statement and so it is implicit. The statement issued by the Head must be with the belief that the junior will work hard after the warning given by him.

Hence, Only assumption I is implicit is the correct answer.

Q77. Answer: (d) 35412

Shortcut Trick

To check divisibility by 8, we only need to verify if the last three digits of the number are divisible by 8.

Checking options: 792 ÷ 8 = 99; 552 ÷ 8 = 69; 112 ÷ 8 = 14; 412 ÷ 8 = 51.5.

Since 412 is not divisible by 8, the entire number 35412 is not divisible by 8.

Therefore The correct answer is 35412.

Alternate Method

Given: Four numbers: 35792, 35552, 35112, and 35412.

Formula Used: A number is divisible by 8 if and only if the number formed by its hundreds, tens, and units digits is divisible by 8.

Step-by-step verification:

=> For 35792: Last 3 digits 792; 792 ÷ 8 = 99 (No remainder).

=> For 35552: Last 3 digits 552; 552 ÷ 8 = 69 (No remainder).

=> For 35112: Last 3 digits 112; 112 ÷ 8 = 14 (No remainder).

=> For 35412: Last 3 digits 412; 412 ÷ 8 = 51 with a remainder of 4.

Therefore The correct answer is 35412.

Additional Information

Divisibility Rule of 2 and 4

A number is divisible by 2 if its units digit is even. For 4, the last two digits must be divisible by 4.

Divisibility Rule of 16

A number is divisible by 16 if the number formed by its last four digits is divisible by 16.

Divisibility Rule of 3 and 9

A number is divisible by 3 (or 9) if the sum of its digits is divisible by 3 (or 9).

Q78. Answer: (a) A mixed economy is one in which the public sector (consisting of government enterprises) and the private se...

The correct answer is A mixed economy is one in which the public sector (consisting of government enterprises) and the private sector (consisting of private enterprises) coexist with each other.

Key Points

• A market system of resource allocation, commerce, and trade in which free markets coexist with government intervention.

• Mixed economies have public, private, legislative, judicial, and regulatory components.

• The main feature of a mixed economy is the co-existence of both public and private enterprises.

• They work together. The industries in the private sector are managed and operated completely by private entrepreneurs.

• It allows the free market and the laws of supply and demand to determine prices.

Additional Information

• An economy is a system whereby goods are produced and exchanged. Without a viable economy, a state will collapse.

• There are three main types of Economy:

• Free market.

• Command

• Mixed economy.

• Capitalism is the greatest economic system because it has numerous benefits and creates multiple opportunities for individuals in society.

• Some of these benefits include producing wealth and innovation, improving the lives of individuals, and giving power to the people.

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Q79. Answer: (b) C

Explanation:

• D likes Mango.

• E likes Orange.

• A likes Apple.

Friend	Fruit
A	Apple
B	
C	
D	Mango
E	Orange
F	

• F neither likes Grapes nor does he like Guava. so, F likes kiwi.

• C neither likes Guava nor does he like Kiwi. so, C likes Grapes.

Friend	Fruit
A	Apple
B	Guava
C	Grapes
D	Mango
E	Orange
F	Kiwi

Hence, C is the correct answer.

Q80. Answer: (a) 30

Given:

Time taken by 12 men to build a wall = 24.5 days

Calculation:

Let total work be 'W'

Let work done by 1 man in 1 day be 'w'

=> W = 12 × w × 24.5 .....(1)

Work done by x man in 10 days,

Where x is the number of men required to build the wall in 10 days,

=> W = x × w × 10 .....(2)

Equating both equations (1) and (2),

=> x × w × 10 = 12 × w × 24.5

=> x = (12 × 24.5)/10

=> x = 294/10 = 29.4 ~ 30 men.

Therefore The number of men needed to build five such walls in 49 days is 30 men.

Q81. Answer: (b) Statements I and II together are sufficient to answer the question.

Given: "pu ma kas' means 'we eat mangoes'.

Statements:

I. 'la ti kas' means 'we are graduate'.

II. 'hum tup pu' means 'they eat bananas'.

From I and II statements we conclude that both are sufficient to answer the question. So 'ma' is the code of 'mangoes'.

Hence, Statements I and II together are sufficient to answer the question.

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Q82. Answer: (a) 23 to 24

The correct answer is 23 to 24.

Key Points

• Articles 23 and 24 of the Indian constitution give people the right against exploitation which guarantees human dignity and protects them from any kind of exploitation.

• Article 23 (1) prohibits the trafficking of humans and forced labour.

• Article 23 (2): Nothing in this article shall prevent the State from imposing compulsory service for public purpose, and in imposing such service the State shall not make any discrimination on grounds only of religion, race, caste or class or any of them.

• Article 24 prevents the employment of children below the age of 14 in factories.

Additional Information

• Right to freedom is given under articles 19-22 of the Indian constitution.

• it includes the right of speech, personal liberty, right to elementary education, etc.

Article 14	**equality before law**
Article 15	prohibition of discrimination on basis of sex, gender, or religion.
Article 16	equality of opportunity in public employment
Article 17	abolition of untouchability
Article 18	abolition of titles

Article 25	**freedom to practice, propagation of any religion**
Article 26	freedom to manage the religious affair
Article 27	freedom of payment of tax for any religious promotion
Article 28	freedom to worship and practice in any religious institution

Q83. Answer: (a) Bengaluru

The correct answer is Bengaluru.

Key Points

• Bengaluru city has emerged as the 'Silicon Valley of India'.

• It is called so because of the number of IT companies and start-ups emerging from the city.

• Bengaluru is the capital city of Karnataka and is located on the mysuru plateau.

• It is also called 'the electronics city of India'

• It ranks 3rd in the number of start-ups emerging globally.

Additional Information

• The IT sector in India contributed about 8% to Indian GDP in 2017.

• Texas instrument was the first MNC to start a development center in Bengaluru.

• Pune is called 'the oxford of east'.

• Chennai is called Detroit of Asia, the Healthcare capital of India

Q84. Answer: (c) Beas

The correct answer is Beas is a tributary of the Indus river.

Key Points

• The river Beas originates in the Beas Kund, near Rohtang pass in Himachal Pradesh, at the height of 4361mt above sea level.

• It is one of the five rivers that give Punjab (“Five Rivers”) its name.

• the Beas enters Punjab state and moves south and then southwest to its confluence with the Satluj river at Harike.

• The other major tributaries of the Indus River in India are Jhelum, Ravi, Chenab, and Sutlej.

Additional Information

• Son is the second-largest southern tributary of the Ganga.

• Subansiri a right-bank tributary of the Brahmaputra flows in Arunachal Pradesh.

• Jonk is a tributary of Mahanadi.

Important Points

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RIVER	ORIGIN
Ganga	Gangotri glacier
Indus	Kailash mountain
Brahmaputra	Tibet
Godavari	Nashik hills
Krishna	Mahabaleshwar

Q85. Answer: (b) Tuticorin

The correct answer is Tuticorin.

Key PointsTuticorin seaport

• Tuticorin seaport is located in the far south as compared to the others.

• Tuticorin Port is one of the 12 major ports in India.

• It is located in the state of Tamil Nadu.

• It was declared to be a major port on 11 July 1974.

• It is the second-largest port in Tamil Nadu and the fourth-largest container terminal in India.

Additional InformationChennai port

• Chennai Port, formerly known as Madras Port.

• It is the second largest container port of India, behind Mumbai's Nhava Sheva.

• The port is the largest one in the Bay of Bengal.

• It is the third-oldest port among the 13 major ports of India with official port operations beginning in 1881.

Mangalore port

• Mangalore Port is small water, all-weather port at Panambur, Mangalore in Karnataka state in India.

• It is the deepest inner harbor on the west coast.

• It is the only major port in Karnataka and the seventh largest port in India.

Paradip port

• Late Biju Patnaik, the then Chief Minister of Odisha, is the founder father of Paradip Port.

• It is the only Major Port in the State of Odisha situated 210 nautical miles south of Kolkata and 260 nautical miles north of Visakhapatnam on the east coast on the shore of Bay of Bengal.

Q86. Answer: (c) Rs. 1,325

Given:

Average value (A) per week = Rs. 1475

Formula used:

Average value = Sum total no. of values/Total no. of values

Calculations:

According to the question,

Let the value of the final week be 'X'.

=> 1475 = (1200 + 1500 + 1875 + X)/4

=> 5900 = 4575 + X

=> X = 5900 - 4575 = Rs.1325.

Therefore The amount to be spent in the final week to ensure that the weekly average is maintained is Rs. 1325.

Q87. Answer: (d) Coriolis force

The correct answer is Coriolis force.

Key Points

• Geostrophic motion is the motion in which fluid flow in a direction parallel to lines of equal pressure (isobars) in a rotating system, such as the Earth.

• Geostrophic flow conditions occur when the pressure gradient force is balanced by the Coriolis deflection.

• The velocity of the flow is proportional to the gradient of the pressure and inversely proportional to latitude.

Additional Information

• Geostatic force (geo-stress) is the natural stress existing in rock and soil structure, also known as the initial stress, absolute

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stress, or original rock stress of rock and soil mass.

• The universal force of attraction, which is acting between objects, is known as the gravitational force.

• Hydrostatic forces are the resultant force caused by the pressure loading of a liquid acting on submerged surfaces.

Q88. Answer: (b) 11 km

Drawing the diagram according to the given information:

• Prince starts from point A. He walks 9 km north, then turns to the east and walks 7 km, then turns to the west and walks 5 km, and finally turns to the north and walks 6 km to reach point 'C'.

• Rakesh starts from point B. He walks 5 km north, then turns to the west and walks 9 km, and finally turns to the north, walks 10 km and meets Prince at point 'C'.

Therefore, distance between A and B is 11 km.

Hence, the correct answer is "11 km".

Q89. Answer: (b) R

Explanation:

The table of alphabet positional value is as follows:

Hence, R is the correct answer.

Q90. Answer: (c) Both 1 and 2

The solution is in Hindi. Read it online.

Q91. Answer: (d) 46

Explanation:

Given:

• The string provided in the question is as follows:

• 33A, 44R, 41V, 54D, 21S, C56, D46, V68, F36, G32, 61C, 47G, N55.

• If the letters in each the following strings are omitted, then the string will be:

• 33, 44, 41, 54, 21, 56, 46, 68, 36, 32, 61, 47, 55.

• Now, the remaining numbers are arranged in increasing sequence.

• 21, 32, 33, 36, 41, 44, 46, 47, 54, 55, 56, 61, 68

The number in the middle of the sequence is 46.

Hence, 46 is the correct answer.

Q92. Answer: (a) Hafez

The correct answer is Hafez.

Key Points

• Khwaja Shams-ud-Din Muhammed Hafez-e-Shiraz

• Hafez is a sufi muslim who was born, raised, and passed away in Shiraz in the 14^(th) century when the Ilkhanate ruled Iran.

• He is regarded as one of Persians' favourite poets.

• People called him Hafez, which means memorizer, because he had memorised the Quran at a young age.

• Hafez disgraces religious hypocrisy and infuses his poetry, particularly his ghazals, or sonnets, with the essence of love and joy. He also offers advice on how to live a better life.

• In Iran, October 12 is annually celebrated as Hafez Day to remember him.

• The most famous work by Hafez is the Divan of Hafez.

• It is a collection of his remaining poetry that was probably put together after his death is a beautiful example of Persian literature, and it can be found in the homes of Persian speakers all over the world. Iranians think that the Quran and the Divan-e-Hafez should be in each and every Iranian home.

Additional Information

• One of Shiraz's cultural landmarks, the Tomb of Hafez is popular and admired by Iranians and visitors alike.

• His writings, which is translated by William Jones translate into English in 1771, had a strong impact on Western thinkers and writers like Goethe and Ralph Waldo Emerson.

• Emerson praised Hafez by saying, "Hafez is the poet for poets."

• Fal-e-Hafez (reading Hafez) is an another ancient tradition of Persian speakers.

Q93. Answer: (a) Only conclusion II follows

Given: M ≤ N < O, A ≥ B < C = O

The combined inequality can be represented as: A ≥ B < C = O > N ≥ M

Explanation:

I. N > B → False (as N < O = C > B → a definite relation between N and B cannot be determined))

II. C > M → True (as C = O > N ≥ M is defined relation between C and M)

Hence, Only conclusion II follows.

Q94. Answer: (b) 17.5%

Given:

The angle of the pie chart with students walking to school = 63°

Formula used:

Percentage (P) = (Given value/Total value) × 100

Calculation:

According to the question,

The total value in the pie chart will be 360°

=> P = (63°/360°) × 100

=> P = 17.5 %.

Therefore The percentage of students who walked to school is 17.5%

Q95. Answer: (c) King George V

The correct answer is King George V.

Key Points

• The Gateway of India is an arch monument built during the 20th century in Bombay, India.

• The monument was erected to commemorate the landing of King George V and Queen Mary at Apollo Bunder on their visit to India in 1911.

• Built-in Indo-Saracenic style, the foundation stone for the Gateway of India was laid on 31 March 1911.

• The structure is an arch made of basalt, 26 meters (85 feet) high.

• The final design of George Wittet was sanctioned in 1914 and the construction of the monument was completed in 1924.

Additional Information

• The Gateway of India is located on the waterfront at the Apollo Bunder area at the end of Chhatrapati Shivaji Marg in South Mumbai and overlooks the Arabian Sea.

• The monument has also been referred to as the Taj Mahal of Mumbai and is the city's top tourist attraction.

• The Gateway was later used as a symbolic ceremonial entrance to India for the Viceroys and the new Governors of Bombay.

• It served to allow entry and access to India.

Q96. Answer: (a) 12

Given:

A and B together can do a piece of work in 10 days

A alone can do the same work in 15 days

C alone can do the same work in 20 days

Calculations:

According to the question,

=> One day work of (A) = 1/15

=> One day work of (C) = 1/20

Let the no. of days B alone took to complete the work be 'x'

=> One day work of (B) = 1/x

Now A's one-day work + B's one-day work = (A + B) one-day work

=> (A) + (B) = (A + B)

=> (1/15) + (1/x) = (1/10)

=> (1/x) = (1/10) - (1/15)

=> (1/x) = (15 - 10)/150

=> (1/x) = 5/150

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=> (1/x) = 1/30 = 30 days
B alone can do the same work in 30 days
Now the work done by B and C together,
B's one-day work + C's one-day work = (B + C) one-day work
=> (1/30) + (1/20) = 1/(B + C)
=> (2 + 3)/60 = 1/(B + C)
=> 5/60 = 1/(B + C)
=> 1/(B + C) = 1/12
=> (B + C) = 12 days
Therefore B and C together do the same work in 12 days.
Shortcut Trick
The total work = LCM(15, 20, 10) = 60 units (since the work is the same for all).
Efficiency of A = 60 / 15 = 4 units/day
Efficiency of A and B together = Total work / Time taken = 60 / 10 = 6 units/day
Efficiency of B = Efficiency of A and B together - Efficiency of A = 6 - 4 = 2 units/day
Efficiency of C = 60 / 20 = 3 units/day
Combined efficiency of B and C = Efficiency of B + Efficiency of C = 2 + 3 = 5 units/day
Time taken = Total work / Combined efficiency = 60 / 5 = 12 days
Therefore B and C together can complete the work in 12 days.

Q97. Answer: (b) Rs. 6,400

Given:
Total Principle = Rs. 10,000
Interest Rate for one part (R1) = 10% p.a.
Interest Rate for other part (R2) = 20% p.a.
Time Period for both the schemes = 2 years
Total Amount received from both schemes = Rs. 12928
Formula Used:
Amount = P × (1 + R/100)^T
Calculations:
According to the question,
Amount = Amount of first scheme + Amount of second Scheme
Let the principal amount of the first scheme be (x) and the second scheme will be (10000- x), then
$12928 = (x) \times (1 + 10/100)^2 + (10000 - x)(1 + 20/100)^2$
$\Rightarrow 12928 = x(1 + 0.10)^2 + (10000 - x)(1 + 0.20)^2$
$\Rightarrow 12928 = x(1.10)^2 + (10000 - x)(1.20)^2$
$\Rightarrow 12928 = 1.21x + (10000 - x)(1.44)$
$\Rightarrow 12928 = 1.21x + 14400 - 1.44x$
$\Rightarrow 0.23x = 1472$
$\Rightarrow x = 1472/0.23 = Rs. 6400$
Therefore The sum that was invested at 10% compounded interest p.a. is RS 6400.

Q98. Answer: (d) Rs. 12,000

Given:
Compound Interest (CI) - Simple Interest (SI) = Rs. 97.2
Principle (P) =?
Rate of interest (R) = 9% per annum
Time period (T) = 2 years
Concept Used:
(CI - SI) = P(R)^T/(100)^T.
Calculations:
According to the question,

=> (97.2) = P(9)²/(100)2.

=> 81P = 972000

=> P = 972000/81 = Rs. 12000

Therefore The sum invested is Rs. 12000.

Q99. Answer: (c) North Malabar region of Kerala

The correct answer is the North Malabar region of Kerala.

Key PointsKolkali

• With a history of about 200 years, Kolkali is a folk art form performed in the North Malabar region of Kerala.

• It is said to have drawn elements from Kalaripayattu, a martial art practised in Kerala and Tamil Nadu.

• In Kolkali, each of the performers holds a stick and moves in a circle, striking the sticks and keeping rhythm to the accompanying music.

• As the music gradually rises in pitch, the pace increases till the performance reaches its climax.

• The circle expands and contracts as the dance progresses.

Additional Information

• Kathak is a classical dance form from Uttar Pradesh.

• Wajid Ali Shah, the last Nawab of Awadh, was a patron and champion of Kathak.

• Today, the state is home to two prominent schools of this dance form, Lucknow Gharana and Banaras Gharana.

• The Gheria Raas is a dance performed by the agriculturists of south Gujarat.

Q100. Answer: (b) Philosophical matters

The correct answer is philosophical matters.

Key Points

• Abhidhamma Pitaka, Vinaya Pitaka, and the Sutta Pitaka are the three Pitakas.

• Vinaya Pitaka deals with the conduct of the Monk order.

• The Sutta Pitaka was a collection of Lord Buddha's Sermons on matters of doctrine and ethics.

• The Abhidhamma Pitaka deals with the matters of metaphysics and psychology.

Additional Information

• During his lifetime the Buddha taught not in Vedic Sanskrit, he also encouraged his monks to propagate his teachings in the vernacular.

• After his death, the Buddhist canon was formulated and transmitted by oral tradition, and it was written down in several versions in the 2d and 1st cent. B.C.

• Its main divisions are called Pitakas.

• Tripitaka, also known as Pali Canon in English, is a traditional term used for Buddhist scriptures.

• The three pitakas are Sutta Pitaka, Abhidhamma Pitaka and Vinaya Pitaka.

Q101. Answer: (a) Rs. 2,650

Given:

Selling Price (SP) = Rs. 2332

Loss % = 12%

Formula used:

SP = CP(1 - Loss/100)

Where, CP = Cost Price, SP = Selling Price

Calculations:

=> 2332 = CP × (1 - 12/100)

=> 2332 = CP × (1 - 0.12)

=> 2332/0.88 = CP

=> CP = Rs. 2650

Therefore The cost price of an item is Rs. 2650.

Q102. Answer: (a) 665

Given:

The ratio of Boys:Girls in a school = 5:7

Total no. of girls = 931

Calculation:

According to the question:

Boys:Girls = 5:7

=> B/G = 5/7

=> B = 5 × G/7

=> B = 5 × 931/7

=> B = 4655/7 = 665.

Therefore The total no. of boys in the school is 665 boys.

Q103. Answer: (d) Seismology

The correct answer is Seismology.

Key PointsSeismology

• Seismology is the study of earthquakes and seismic waves that move through and around the Earth.

• A seismologist is a scientist who studies earthquakes and seismic waves.

• An example of seismology is geological surveying.

Additional Information Graphology

• Graphology is the analysis of handwriting with an attempt to determine someone's personality traits.

• The theory underlying graphology is that handwriting is an expression of personality.

Ichthyology

• Ichthyology is the branch of zoology devoted to the study of fish, including: bony fish, Osteichthyes; cartilaginous fish, Chondrichthyes; and jawless fish, Agnatha.

• The discipline can include the biology, taxonomy and conservation of fish, as well as husbandry and commercial fisheries.

Selenology

• Selenology is a branch of astronomy that deals with the moon.

• Selenologist is a scientist who studies the physical features of the moon.

Q104. Answer: (b) 9 : 26

Given :

In first blend apple juice to orange juice ratio = 20% : 80 % = 1 : 4

In another blend apple juice to orange juice ratio = 70% : 30% = 7 : 3

In mixture ratio of apple juice to orange juice = 4 : 3

Calculations :

Let the ratio of the first and second blend be K : 1.

Then, according to question,

The ratio of apple juice to orange juice in the mixture

=> frac1/5K +7/10×14/5K+3/10×1 = 4/3

=> { 1/5 K + (7/10) × 1} × 3 = {(4/5)K + (3/10) × 1} × 4

=> (3/5 K) - (16/5 K) = (12/10) - (21/10)

=> - (13/5 K) = - (9/10)

=> K = 9/26

Hence, the required ratio is 9 : 26.

Shortcut Trick

Mixture (I) -

Quanity of Apple = 20% and quantity of Orange = 80%

So, Apple : orange = 20 : 80 = 1 : 4

Mixture (II) -

Quanity of Apple = 70% and quantity of Orange = 30%

So, Apple : orange = 70 : 30 = 7 : 3

In mixture ratio of apple juice to orange juice = 4 : 3

Thus, required ratio

=> 9/70 : 13/35

=> 9 : 26

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Hence, the required ratio is 9 : 26.

Q105. Answer: (c) 1960

The correct answer is1960.

Key Points

• The accelerated Agriculture District Programme (IADP) was begun as the first major observation in intensive agriculture development in the year 1960.

• It had covered all the important cash crops grown in the districts although attention was to be laid on the dominant food - grain crops such as paddy, wheat and millets.

• The main thought behind the IADP was that increased agricultural yield shall lead to economic growth, which shall carry welfare to the society.

Additional Information

• The intensive Agriculture Development program was initiated with the benefit of the Ford Foundation. It was begun as a pilot basis in one district of 7 states at that time.

• The IADP generally known as the package program was begun in three districts in 1960 - 61 and in four districts in 1962 - 63. The seven districts were:

• Thanjavur (Tamil Nadu)

• West Godavari (Andhra Pradesh)

• Shahabad (Bihar)

• Raipur (Madhya Pradesh)

• Aligarh (Uttar Pradesh)

• Ludhiana (Punjab)

• Pali (Rajasthan)

Q106. Answer: (b) 119, 119

The pattern followed here is:

Hence, 119, 119 is the correct answer.

Q107. Answer: (d) Ne

The correct answer is Ne.

Key Points

• The noble gases are uncolored, scentless, bland, nonflammable gases that were once classified.

• They were once classify group 0 in the periodic table because it was considered they had a valence of zero, meaning their atoms cannot integrate with those of other elements to form compounds.

• The noble gases have full valence electron shells. Valence electrons are the extreme electrons of an atom and are usually the only electrons that partake in chemical bonding.

Z	Element	No. of electrons/shell
2	helium	2
10	neon	2, 8
18	argon	2, 8, 8
36	krypton	2, 8, 18, 8
54	xenon	2, 8, 18, 18, 8
86	radon	2, 8, 18, 32, 18, 8
118	Oganesson	2, 8, 18, 32, 32, 18, 8 (predicted)

Additional Information

• Nitrogen is the chemical element with the letter N and atomic number 7. Nitrogen is a nonmetal and the lightest member of group 15 of the periodic table

• Fluorine is a chemical element with the letter F and atomic number 9. It is the lightest halogen and exists at accepted conditions as a highly harmful, pale yellow diatomic gas.

• Calcium (Ca), chemical element, one of the acidic-earth metals of Group 2 (IIa) of the periodic table. It is the most ample burnished element in the human body and the fifth most ample element in Earth's crust.

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Q108. Answer: (d) Kasturba Hospital, Manipal

The correct answer is Kasturba Hospital, Manipal.

Key Points

• Kasturba Hospital, Manipal, has been granted 'IMC RBNQ Performance Excellence Prize 2020 health the care sector from IMC Ramakrishna Bajaj National Quality Award Trust, Mumbai.

• The corporation has successfully ensured that 80 per cent total energy consumption is sourced from sustainable energy using innovative practices for low carbon growth imaginative thinking to design systems and procedures to adopt changes easily, it speaks

• The grant was named after the ate Ramakrishna Bajaj, past president of IMC. The award procedure follows meticulous training and evaluation, it speaks

Additional Information

• AJ Institute of Medical Sciences is a medical college in Mangalore with an annual intake of 150 students. The college is a runner of A J Hospital and Research center. The college is enis encouragingndustrialist A.J. Shetty. The college was accepted on 21 October 2002.

• The P. D. Hinduja National Hospital and Medical Research Centre is a cross-functional, tertiary-care hospital in Mumbai, India. It was founded by Parmanand Deepchand Hinduja, in joint action with the Massachusetts General Hospital.

• Lakhumal Hiranand Hiranandani (1917–2013) was an Indian otorhinolaryngologist, social activist, and philanthropist, known for pioneering a number of surgical procedures which later came to be well known as Dr. Hiranandani's functioning.

Q109. Answer: (d) 784

Given:

98, 28, 112 for LCM

Calculations:

L C M	**98, 28, 112**
2	49, 14, 56
2	49, 7, 28
2	49, 7, 14
2	49, 7, 7
7	7, 1, 1
7	1, 1, 1

=> L.C.M. = 2 × 2 × 2 × 2 × 7 × 7 = 784.

Therefore The L.C.M. for 98, 28, and 112 will be 784.

Q110. Answer: (b) Cumulus

The logic followed here is:

→ Cirrus, Cirrocumulus, Cirrostratus are the three mains types of high clouds.

Whereas,

→ Cumulus is a type of thick white cloud formed when hot air rises very quickly.

Additional Information

Cirrus, Cirrocumulus, Cirrostratus → They are typically thin and white in appearance, but can appear in a magnificent array of colors when the sun is low on the horizon.

Cumulus → Cumulus clouds are a genus of free-convective low-level cloud along with the related limited-convective cloud stratocumulus. These clouds form from ground level to 2,000 metres (6,600 ft) at all latitudes. Stratus clouds are also low-level.

Hence, "Cumulus" is the correct answer.

Q111. Answer: (d) Neither conclusion I nor II follows

The least possible Venn diagram is shown below:

Conclusions:

I. All teachers are students →Does not follow → (As all teachers are students is false because All students are teachers and some teachers are students follow)

II. All humans are students → Does not follow → (As all humans are students is false because All humans are students and some humans are students follow)

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Thus, neither Conclusion I nor Conclusion II follow.

Hence, "Neither conclusion I nor II follows" is the correct answer.

Q112. Answer: (c) KWTR

The position of letters according to the English alphabet series:

'RACE' is written as 'WFHJ'

And,

'TRAP' is written as 'YWFU'

Similarly,

'FROM' be written as '?'

Hence, the correct answer is "KWTR".

Q113. Answer: (b) Bundi in Rajasthan

The correct answer is Bundi in Rajasthan.

Key Points

• Raniji ki Baori (or Queen's stepwell) is a noted stepwell located in Bundi town in Rajasthan state in India.

• It was construct in 1699 by Rani Nathavati Ji Solanki who was the junior queen of the ruling Rao Raja Anirudh Singh of Bundi.

• It was build during the reign of her son Maharao Raja Budh Singh who govern Bundi from 1695 AD to 1729 AD.

• Raniji ki Baori has amazing cleft on its pillars and a giant arched gate.

• Stone elephant statues that face each other stand in the region.

Additional Information

• Banswara is a city situated in the southerly part of the Indian state of Rajasthan. It is closed by the boundary of both the states of Gujarat and Madhya Pradesh.

• The city of Jaipur was establish by the King of Amer, Maharaja Sawai Jai Singh II on 18 November 1727, who govern from 1699 to 1743.

• Jaisalmer stands on a ridge of yellowish sandstone and is induct by the earliest Jaisalmer Fort.

Q114. Answer: (c) Limestone

The correct answer is Limestone.

Key Points

• The minerals which do not hold any metallic elements in their chemical configuration are called nonmetallic minerals.

• These are the kind of minerals from which no new result can be constructed if they will undergo melting.Clay, diamond, mica, quartz, Limestone, etc. are certain samples of non-metallic minerals.

Additional Information

• Pyrite, also known as iron pyrite or fool's gold, is a naturally come out iron disulfide mineral.

• Hematite naturally comes out in black to steel or silver-gray, brown to reddish-brown, or red colors. It is mined as a key ore mineral of iron.

• Bauxite is a sedimentary rock with a moderately high aluminium content. It is the world's chief origin of aluminium and gallium.

Q115. Answer: (b) December 2001

The correct answer is December 2001.

Key Points

• Valmiki Ambedkar Awas Yojana (VAMBAY)

• It was introduced by the Prime Minister of India on December 2, 2001.

• It is a government-funded scheme for the development of urban slum dwellers.

• The main goal of this scheme is to improve the housing problems for those urban slum dwellers who lives below the poverty line by providing them with shelters and access to community toilets.

• It aims to raise the living standard of urban slum dwellers by providing them shelters and it also helps to foster a healthy environment by building toilets.

• So far, for VAMBAY government had already sanctioned a sum of Rs.590.00 crore and have allocated 2,13,066 shelters as well as 28,753 Toilet Seats.

• The implementation of the scheme VAMBAY is a partnership between the federal and the state governments, with each providing a contribution of 50%.

Additional Information

• In India, other than VAMBAY there are various others schemes for the development of urban slum dwellers such as National

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Slum Development Programme (NSDP) launched by the Prime Minister of India in August, 1996.

• By merging VAMBAY and NSDP an Integrated Housing and Slum development Programme (IHSDP) is launched by the government of India with the aim of providing shelters and all the basic facilities to the urban slum dwellers.

• For the rural population of India, Indira Awas Yojana was was launched by Rajiv Gandhi in 1985 to provide them shelters.

Q116. Answer: (b) Either Statement I or Statement II is sufficient

Explanation:

Statements I: One-fourth of the price of each chair is Rs. 140.

• This implies price of one chair =140 × 4 = 560

• Price of 10 chairs =560 × 10 = 5600

Statement II: The total price of 3 chairs is Rs. 560 more than the total price of 2 chairs.

• Total price of 3 chairs - Total price of 2 chairs = 560

• Price of one chair = 560

Hence, Either Statement I or Statement II is sufficient is the correct answer.

Q117. Answer: (d) Article 76

The correct answer is Article 76.

Key Points

• Attorney-General of India

• In India Attorney-General (AG) is the chief legal advisor of the Indian government's.

• The President of India appoints the AG on the advice of Union Cabinet under Article 76 of the Constitution of India, 1950.

• The Attorney-General have an advisory role to counsel the government of India in the legal matters and their positions are hold as per the President's pleasure. This indicates that there is no specific tenure, and that they serve until the President appoints their removal.

• In addition to serving as the government's primary legal counsel, the AG of India should also appears in the Supreme Court on behalf of the government.

• In India, there have been 16 AGs since 1950. R Venkatramaniis the current attorney general of India. In 2023, President Draupadi Murmu appointed him..

Additional Information

• The Attorney-General of India is also a first law officer of the country.

• Motilal Chimanlal Setalvad was appointed as the first attorney-general of India. His tenure as attorney general from 1950 to 1963 is still the longest tenure served by any attorney-general.

• The AGs has the right of audience to appear in all Indian Court's and to take part in the Parliamentary sessions, but not to vote.

• The Attorney General of India lacks executive authority, in contrast to the Attorney General of the United States. The Law Minister of India is the in charge of certain duties.

Q118. Answer: (b) 1522662615

The position of letters according to the English alphabet series.

Given: The letters are coded as per their reverse alphabetical orders (A as 26 and Z as 1)

If a consonant is immediately preceded as well as immediately followed by a vowel, it is coded as '66'

Here, alphabet G is immediately preceded as well as immediately followed by a vowel so that they coded as 66

So, LEGAL will be coded as 1522662615

Hence, 1522662615 is the correct answer.

Q119. Answer: (b) R

Five friends: P, Q, R, S and T sitting in a row facing North

1) R is sitting exactly in the middle of the row.

2) T is sitting to the immediate right and immediate left of S and R, respectively.

3) Q is not sitting at the extreme end.

Clearly, we can see that R is sitting second to the left of P.

Hence, the correct answer is "R".

Q120. Answer: (c) Product V

Formula used:

Profit = SP - CP

Calculations:
For Product V (in lakhs)
=> Profit = 78 - 65 = 13
For Product W (in lakhs)
=> Profit = 85.5 - 75 = 10.5
For Product X (in lakhs)
=> Profit = 69 - 60 = 9
For Product Y (in lakhs)
=> Profit = 92 - 80 = 12
For Product Z (in lakhs)
=> Profit = 77 - 70 = 7
Therefore The company earned a maximum profit in Product V of 13 (lakhs).

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