

A.
B.
C.
D.

40. If $x^3 - 2$
is _____.

A.
B.
C.
D.

41. The su
54689

A
B
C
D

C. 360°

D. cannot determined without actual value of n

35. A man covers some distance in 2 hours. Had he move slower by 4 km/h, he will cover the same distance in 6 hours. Find the speed of man.

- A. 4.5 km/h
- B. 6 km/h
- C. 9 km/h
- D. 13.5 km/h

36. The height of a tree was 4.8 m. After two years the height of the tree was increased by 12.5%. The new height of tree after one year is _____ if the height increased with same ratio.

- A. 0.6 m
- B. 5.1 m
- C. 5.4 m
- D. 6.0 m

Four lettered pairs (A to D) follow a relationship similar to the words given in the question. Select the pair that best expresses a relationship similar to that expressed in the original pair in capital letters.

16. FLOWER: BUNCH::

- A. captain: team
- B. man: men
- C. manager: business
- D. ship: fleet

17. BLACKSMITH: IRON::

- A. cook: kitchen
- B. farmer: grower
- C. potter: clay
- D. shoemaker: cobbler

COW: CALF::

- A. dog: bark
- B. fish: water
- C. horse: foal
- D. tortoise: shell

option, from the given
below each.

ten minutes ago-

10. Emirates airlines plane _____

- A. has landed
- B. land
- C. landed
- D. was landed

11. Someone must deal with the situation _____ the spot.

- A. beside
- B. by
- C. of
- D. on

12. Though the doors were closed but we could still hear
the _____ of laughter.

- A. conversation
- B. roars
- C. voices
- D. whispers

13. Which team _____ the game?

- A. did it win
- B. did they win
- C. won
- D. won it

14. I'll be back as soon as I _____ my clothes.

- A. change
- B. changed
- C. changes
- D. have changed

42. What is the angle between the hands of a clock at 9 O'clock?

- A. 0°
- B. 60°
- C. 90°
- D. 120°

43. In a scalene triangle _____.

- A. all angles are different in measure
- B. all angles are same in measure
- C. every angle is of 90°
- D. two angles are same in measure

44. A dice is rolled twice. The probability of getting doublets is _____.

- A. $1/36$
- B. $1/18$
- C. $1/9$
- D. $1/6$

45. The value of x in the linear equation $\frac{3x - 4}{2} - \frac{x}{4} = \frac{13}{6}$ is _____.

- A. $-50/3$
- B. $-10/3$
- C. $10/3$
- D. $50/3$

46. Find the quadratic equation whose roots are 1 and 2.

- A. $x^2 - 3x + 2$
- B. $x^2 - 3x - 2 = 0$
- C. $x^2 - 3x + 2 = 0$
- D. $x^2 - 2x + 3 = 0$



B-22-1093-PRE-MEDICAL-WHITE-020323-31646

11

26. Which of the following is a perfect number

- A. 24
- B. 26
- C. 28
- D. 32

$$40. \quad 3\log_{10}5 + \log_{10}24 - \frac{1}{2}\log_{10}9 = \underline{\hspace{2cm}}$$

A. 2

B. 3

C. 100

D. 1000

\checkmark $\sqrt[5]{5}$

$\frac{360}{130}$
 23°

$\frac{360}{180}$
 8°

10,

34. The number of 5-digit numbers, that can be formed from the digits 4, 3, 5, 7, 9 is _____.

- A. 60
- B. 120
-  C. 140
- D. 180

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25. If the cost of 2 copies and 3 books is Rs. 1300 and cost of 5 copies and 1 book is 2600. Find the cost of a copy and a book.

- A. Rs. 100
- B. Rs. 500
- C. Rs. 600
- D. Rs. 50000

26. Abdullah gave Rs. 150 to Umar and Umar take Rs. 65 to Ahmed. After this all of them have same money. How much more Abdullah has than Ahmed?

- A. Rs. 30
- B. Rs. 35
- C. Rs. 85
- D. Rs. 215

27. Ahmed added two containers of paint containing 40 liters and 55 liters of paint. After using 49 liters in room and 34 liters in kitchen, how much paint is left?

- A. 7 liters
- B. 12 liters
- C. 21 liters
- D. 22 liters

28. If $f(x) = 5a$ then it is called _____ function.

- A. constant
- B. identity
- C. one-one
- D. quadratic

29. The quadratic equation with roots 2, -3 is _____

- A. $x^2 - x + 6$
- B. $x^2 + x + 6 = 0$
- C. $x^2 + x - 6 = 0$
- D. $x^2 - x - 6 = 0$

29. A certain number of balls were purchased for Rs. 750. Five more balls will be purchased with the same amount if price of each ball is less by Rs. 12.5. The original number of purchased balls is _____.

21.

- A. 10
- B. 15
- C. 20
- D. 50

$$-1 = 9 - 15 - 70$$

$$-1 = 6 - 70$$

$$\begin{array}{r} 70 \\ 6 \\ \hline 64 \end{array}$$

$$\begin{array}{r} -76 \\ -15 \\ \hline -85 \end{array}$$

30. If $f(x) = x^2 + 5kx - 70$ and $f(-3) = -1$ then value of k is _____.

- A. $-62/15$
- B. -4
- C. 4
- D. $62/15$

$$-1 = 9 - 15 - 70$$

$$= 9 - 85$$

$$62/15$$

$$\begin{array}{r} -85 \\ 9 \\ \hline 76 \end{array}$$

31. Abdullah gave Rs. 135 to Umar, and Umar takes Rs. 65 from Ahmed. After this all of them have same amount of money. How much Abdullah has more than Ahmed?

- A. Rs. 65
- B. Rs. 70
- C. Rs. 265
- D. Rs. 335

$$\begin{array}{l} a = s+t \\ d = 10 + 8 + 65 \\ \hline d = 73 \end{array}$$

$$s = \frac{d}{t}$$

32. A man moves from town A to town B in 8 hours. Coming back from B to A he moves faster by 10 km/h and reach to town A in 7 hours. What is the distance from town A to B?

- A. 56 km
- B. 420 km
- C. 560 km
- D. 1120 km

$$\begin{array}{l} (a+b)^2 = a^2 + 2ab + b^2 \\ d = 10 \times 15 \end{array}$$

$$\begin{array}{r} 60 \\ 16 \\ \hline 84 \end{array}$$

33. If $a + b = 10$ and $a - b = 4$, then the value of $2(a^2 - b^2)$ is _____.

- A. 20
- B. 40
- C. 60
- D. 80

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

$$62 - 1 + 61$$

$$-3 = 1 - 5R - 70$$

$$? = -68 - 5R$$

$$\begin{array}{r} 69 \\ 3 \\ \hline 66 \end{array}$$

D. 6

44. If $A:B = 5:7$ and $C:B = 7:11$ then $A:C:B =$ _____

- A. 49:45:77
- B. 35:55:66
- C. 55:77:49
- D. 49:55:77

59. If the solubility of PbF_2 at 25°C is 0.64g/dm^3 , what will be its K_{sp} value?

- A. 4.0×10^{-8}
- B. 6.0×10^{-8}
- C. 7.0×10^{-8}
- D. 8.0×10^{-8}

60. Which one of the following techniques can be used to find exact mass of an isotope?

- A. Chromatography
- B. Crystallization
- C. Mass spectrometry
- D. Photo spectrometry

61. When Grignard's reactant reacts with alcohol, what will be the main product along with the side product containing Magnesium?

- A. Aldehyde
- B. Alkane
- C. Alkene
- D. Alkyne



PHYSICS

59. Which one of the following is a base unit?

- A. Force
- B. Length
- C. Pressure
- D. Work

60. If two vectors have same magnitudes and directions, they are termed as _____.

- A. equal vectors
- B. null vectors
- C. position vectors
- D. unit vectors

61. The shortest distance between any two points is called _____.

- A. displacement
- B. distance
- C. speed
- D. velocity

62. How can we see image in a mirror?

- A. Due to deflection of light
- B. Due to interference of light
- C. Due to reflection of light
- D. Due to refraction of light

63. Which one of the following is also known as the law of conservation of energy?

- A. Carnot's Theorem
- B. First Law of Thermodynamics
- C. Law of Mass Action
- D. Second Law of Thermodynamics



WHITE-020323-3

QUANTITATIVE REASONING

27. The multiplicative inverse of $-5/6$ is _____.

- A. $-5/6$
- B. $-6/5$
- C. $5/6$
- D. $6/5$

28. 75% of what number is 51?

- A. 38.25
- B. 68
- C. 100
- D. 136

29. Cost of 6 books is Rs. 968. The cost price of 3 books is _____.

- A. Rs. 161.333
- B. Rs. 322.667
- C. Rs. 484
- D. Rs. 4840

30. $32 - [36 - 2\{5 \times 2 + 7 - 6\}] = \text{_____}$.

- A. -14
- B. 2
- C. 14
- D. 18

31. What is the next term in the sequence 3, 7, 12, 18, 25,
33, _____.

- A. 38
- B. 39
- C. 40
- D. 42

92. If $x = 8^{\frac{4}{3}}$, what is the value of x^2 ?

- A. $\frac{4}{4}$
- B. 6
- C. $10^{\frac{2}{3}}$
- D. 12
- E. 16

93. What is the value of $m^2 - 4mn + n$ when $m = -1$ and $n = -3$?

- A. -15
- B. -14
- C. -11
- D. 8
- E. 10

94. How many degrees are there in a Pi chart?

- A. 90
- B. 60
- C. 180
- D. 360
- E. 400

95. The total weight of father and his son is 250 kg. If father's weight is 20 kg more than 3 times his son's weight. What is the weight of the son?

- A. 40
- B. 50
- C. 60
- D. 80
- E. 90

96. In an examination 200 students failed in English and 800 failed in Physics. If total 900 students failed in any subject then how many failed in both?

- A. 30
- B. 40
- C. 50
- D. 100

N TESTING COURSE
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Test



10. The instruction _____ you to switch off electric equipment before you go out.

- A. tell
- B. tells
- C. to tell
- D. told

11. Yesterday I went to a party. Now I am going to tell you what I _____ when I arrived.

- A. saw
- B. see
- C. seeing
- D. seen

12. We were late and _____ managed to catch the train.

- A. fast
- B. hardly
- C. hurriedly
- D. scarcely

13. The goods were never delivered _____. the promise we had received.

- A. although
- B. because
- C. in spite of
- D. yet

51. The property of binding of light around obstacles and spreading of light waves into the geometrical shadow of an obstacle is called _____ of light.

- A. diffraction
- B. interference
- C. reflection
- D. refraction

52. "The sum of all the currents flowing towards a point is equal to the sum of all the currents flowing away from the point", is the statement of _____.

- A. Flehmening's Rule
- B. Kirchhoff's First Rule
- C. Kirchhoff's Second Rule
- D. Right Hand Rule

53. The shock absorber of a car is an example of _____ oscillation.

- A. damped
- B. resonance
- C. simple hormonic motion
- D. undamped



AN 8212
10398881479
Ticket No.
63691

Name of passenger _____

26. Nadir was able to get his bar of silver back by using his _____.

- A. money
- B. smile
- C. wisdom
- D. words

55. Abdullah gave Rs. 60 to Umar and Umar gave Rs. 90 to Ahmed. After this, all of them have same money. How much more Umar has than Ahmed?

- A. Rs. 30
- B. Rs. 60
- C. Rs. 90
- D. Rs. 120

56. The average of first ten whole numbers is _____.

- A. 3.5
- B. 4.0
- C. 4.5
- D. 5.5

57. A man invested Rs. 10000 in the bank to get a profit of

39. The mean score of ten students in a test is 49. If one more student is added, then the mean score of students become 50. Find the score of the last student.

- A. 10
- B. 50
- C. 60
- D. 62

$$\frac{x}{10} = 49$$

$$x = 490$$

$$11 \sqrt{490}$$

40. $3\log_{10}5 + \log_{10}24 - \frac{1}{2}\log_{10}9 = \underline{\hspace{2cm}}$.

- A. 2
- B. 3
- C. 100
- D. 1000

$$\begin{array}{r} 360 \\ 130 \\ \hline 230 \end{array}$$

$$360$$

$$\begin{array}{r} 180 \\ \hline 80 \end{array}$$

41. Simplify $\frac{\sqrt{25}}{2\sqrt{2} - \sqrt{3}}$.

- A. $2\sqrt{2} + \sqrt{3}$
- B. $-2\sqrt{2} + \sqrt{3}$
- C. $-2\sqrt{2} - \sqrt{3}$
- D. $2\sqrt{2} - \sqrt{3}$

$$30 \times 8 - \frac{11}{2} \times 20$$

$$\begin{array}{r} 240 \\ -110 \\ \hline 130 \end{array}$$

42. The number of triangles formed inside a polygon is equal to the number of octagons formed inside the polygon. Then the number of sides of polygon are _____.

- A. 5
- B. 10
- C. 11
- D. 22

$$\begin{array}{r} 30 \times 8 - \frac{11}{2} \times 20 \\ 240 - 110 \\ \hline 130 \end{array}$$

$$\begin{array}{r} (10-2) \times 180 \\ (n-8 \times 180) \\ \hline 160 \end{array}$$

43. Ahmed travelled 400 km in 5 hours, then he cycles for 4 hours with a speed of 5 km/h and walks for 1 hour with a speed of 2 km/h. What is the average speed of Ahmed during the whole journey?

- A. 29 km/h
- B. 30 km/h
- C. 42.2 km/h
- D. 45 km/h

$$\begin{array}{r} 240 - 110 \\ 240 \\ \hline 400 \\ 240 \end{array}$$

$$\begin{array}{r} 8 \\ 16 \\ 24 \end{array}$$

53. Which of the following is a perfect numbers

- A. 24
- B. 26
- C. 28
- D. 32

54. The sale price of a book is Rs. 888 with a loss of 8%.
What is the cost price of a book?

- A. Rs. 870
- B. Rs. 900
- C. Rs. 910
- D. Rs. 993

55. Abdullah gave Rs. 60 to Umar and Umar gave Rs. 90 to Ahmed. After this, all of them have same money. How much more Umar has than Ahmed?

- A. Rs. 30
- B. Rs. 60
- C. Rs. 90
- D. Rs. 120

56. The average of first ten whole numbers is _____.

- A. 3.5
- B. 4.0
- C. 4.5
- D. 5.5

57. What amount is invested in the bank to get a profit of Rs. 3500 at a rate of 7% for 4 years?

- A. 10000
- B. 12500
- C. 15000
- D. 16500



B-22-1093-PRE-MEDICAL-WHITE-020323-31646

33. The age of mother is 3 times the age of her daughter. Six years ago, the age of mother was 5 times the age of her daughter. The age of mother after two years will be _____.

- A. 32 years
- B. 36 years
- C. 38 years
- D. 40 years





50



QUANTITATIVE REASONING

21. A boy cycles for 4 hours with a speed of 6km/h and covers 9km by foot in 7 hours. The average speed of boy is _____.

- A. 3.0 km/h
- B. 3.5 km/h
- C. 7.3 km/h
- D. 8.25 km/h

$$\begin{array}{r} S = \frac{15}{11} \\ 11 \overline{) 15} \\ \underline{-11} \\ 4 \end{array}$$

22. There were 20 boys and 10 girls in a class. What is the probability of selecting a girl or a boy as a monitor?

- A. $1/30$
- B. $1/3$
- C. $2/3$
- D. $1 \checkmark$

$$= \frac{36}{36}$$

23. The arithmetic mean of 10 values is 50. If -27 is added to data. Then new arithmetic mean is _____.

- A. $\frac{23}{23}$
- B. 38.5
- C. 43
- D. 47.3

$$10 = 50$$

$$10 - 27 = 50$$



24. An amount of Rs. 19000 was invested at a rate of 6% for 4 years on simple interest basis. The total amount in the bank account after 4 years is _____.

- A. Rs. 22000
- B. Rs. 23500
- C. $\frac{23560}{10}$
- D. Rs. 80560

$$\frac{27}{17}$$

25. The age of father is 4 times the age of his son. 3 years ago, the age of father was 5 times the age of his son. The present age of father is _____.

- A. 10 years
- B. 24 years
- C. 48 years
- D. 60 years

$$\begin{array}{l} F = 4S \\ F - 3 = (S - 3)5 \\ 4S - 3 = 5S - 15 \end{array}$$

26. $[24 - 32 \div \{41 - 25\} - 2 \times 8] + 3 = \text{_____}$

- A. -3
- B. 0
- C. 6

$$[24 - 2 - 2 \times 8] + 3$$

$$41 - 25$$

$$24 - 16 = 8$$

$$8 - 2 = 6$$

$$6 + 3 = 9$$

Edit

Annotate

Fill & Sign

Convert

All



QUANTITATIVE REASONING

27. Which of the following is a rational number?

- A. π
- B. 1.252729...
- C. 7.323232...
- D. $\sqrt{27}$

28. If $f(x) = 3x^4 - 2x^2 + 7$ then value of $f(\sqrt{2})$ is _____.

QUANTITATIVE

21. Number of lines of symmetry that can be passes through regular hexagon is _____.

- A. 1
- B. 2
- C. 3
- D. 6

ANSWER IS 6

25. If the cost of 2 copies and 3 books is Rs. 1300 and cost of 5 copies and 1 book is 2600. Find the cost of a copy and a book.

- A. Rs. 100
- B. Rs. 500
- C. Rs. 600
- D. Rs. 50000

26. Abdullah gave Rs. 150 to Umar and Umar take Rs. 65 to Ahmed. After this all of them have same money. How much more Abdullah has than Ahmed?

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- B. Rs. 35
- C. Rs. 85
- D. Rs. 215

27. Ahmed added two containers of paint containing 40 liters and 55 liters of paint. After using 49 liters in room and 34 liters in kitchen, how much paint is left?

- A. 7 liters
- B. 12 liters
- C. 21 liters
- D. 22 liters

28. If $f(x) = 5a$ then it is called _____ function.

- A. constant
- B. identity
- C. one-one
- D. quadratic

29. The quadratic equation with roots 2, -3 is _____.

- A. $x^2 - x + 6$
- B. $x^2 + x + 6 = 0$
- C. $x^2 + x - 6 = 0$
- D. $x^2 - x - 6 = 0$

9. What is/are the charge(s) on Gamma Rays?

- A. Negative
- B. No charge at all
- C. Positive
- D. Both positive and negative charges

16. *HELMET: HEAD::*
- (A) Pendant: Neck
 - (B) Breastplate: Chest
 - (C) Pedal: Foot
 - (D) Knapsack: Back

QUANTITATIVE REASONING

What is the volume of the cone whose base radius is 3cm and slant height is 5cm?

- A. 5π
- B. 8π
- C. 12π
- D. 15π

22. $\frac{27^{3n+1} \cdot 81^{-n+2}}{9^{n+5} \cdot 3^{3n-1}} = \underline{\hspace{2cm}}$.

- A. 1
- B. 3
- C. 9
- D. 27

23. Car A is moving with speed of 60 km/h and car B is moving with a speed of 80 km/h in the same direction. What is the distance between them after 3 hours if they started at the same point?

- A. 20 km
- B. 60 km
- C. 180 km
- D. 240 km

$$d = 140 \times t (3)$$

$$= \underline{\hspace{2cm}} \text{ km}$$

24. $\{38 - [35 - 2(5 + 7 - 6)]\} \div 3 + 1 = \underline{\hspace{2cm}}$.

- A. 4
- B. 5
- C. 6
- D. 32

$$\begin{aligned} &= \frac{1}{3} \pi r^2 h \\ &= \frac{1}{3} \times \frac{22}{7} \times \frac{9}{4} \times 5 \text{ cm}^3 \\ &= 130 \end{aligned}$$

34. The roots of the equation $x^2 + x + 1 = 0$ are _____.
 (Where w is a cube root of 1).

- A. 1, w, w^2
- B. w, w^2
- C. 1, w^2
- D. 1, w

$$x^2 + bx - x + 1$$

$$x(x+1) - 1(x+1)$$

$$(x-1)(x+1)$$

$$\frac{8}{16}$$

35. Number 5 in 94.60572 is at _____ place.

- A. hundredths
- B. ones
- C. tenths
- D. thousandths

$$x=1$$

$$\begin{array}{r} 30 \\ 8 \\ \hline 24 \end{array}$$

36. In a tournament 8 teams were playing. Each team has to play one match with every other team. The total number of matches that were played are _____. 11

- A. 25
- B. 28
- C. 56
- D. 64

$$36 \times 8 - \frac{11}{2} \times 2 / 16$$

$$= 240 - 110$$

$$\frac{110}{93}$$

37. A dice is rolled twice. The probability of getting a sum of 6 on dice is _____.

- A. $1/36$
- B. $1/18$
- C. $5/36$
- D. $1/6$

$$\frac{360}{360} = \frac{n(n+1)}{130} = \frac{n(n-1)}{2}$$

38. What is the angle between the hands of clock at 20 minutes to 8 O'clock?

$$\frac{240}{110} = \frac{0}{130}$$

- A. 5°
- B. 10°
- C. 15°
- D. 20°

$$30 - 8 - \frac{11}{2} \times M$$

$$240 - 110 = 8(7)$$

$$= 30H - \frac{11}{2} \times M$$

$$\frac{490}{36} = \frac{490}{21}$$

$$- 366$$

$$\frac{23}{23}$$

39. The mean score of ten students in a test was 49. If one more student is added, then the mean score of all eleven students become 50. Find the score of the new student.

- A. 10
- B. 50
- C. 60
- D. 62

$$\frac{x}{10} = 50$$

40. $3\log_{10}5 + \log_{10}24 - \frac{1}{2}\log_{10}9 = \underline{\hspace{2cm}}$

- A. 2
- B. 3
- C. 100
- D. 1000

$$\begin{array}{r} 360 \\ 130 \\ \hline 230 \end{array}$$

41. Simplify $\frac{\sqrt{25}}{2\sqrt{2}-\sqrt{3}}$.

$30 \times 8 -$

- A. $2\sqrt{2} + \sqrt{3}$
- B. $-2\sqrt{2} + \sqrt{3}$
- C. $-2\sqrt{2} - \sqrt{3}$
- D. $2\sqrt{2} - \sqrt{3}$

$240 -$

42. The number of triangles formed inside a regular polygon is equal to the number of octagons formed outside the polygon. Then the number of sides of the polygon is

$\underline{\hspace{2cm}}$.

$30 \times 8 - 11 \frac{1}{2} \times$

- A. 5
- B. 10
- C. 11
- D. 22

$270 - 110 \underline{\hspace{2cm}}$

43. Ahmed travelled 400 km in 5 hours with a speed of 5 km/h, and another 240 km with a speed of 2 km/h. What is the average speed of Ahmed during the whole journey?

- A. 29 km/h
- B. 240 - 110

22. There were 20 boys and 10 girls in a class. What is the probability of selecting a girl or a boy as a monitor?

- A. $1/30$
- B. $1/3$
- C. $2/3$
- D. 1 ✓

$$= \frac{36}{36}$$

44. What is the next term in the sequence - 2, 0, 18, 108, 486, _____.

- A. 1856
- B. 1890
- C. 1924
- D. 1944

$$\left(\frac{112}{108} \times 75 \right)$$

$$\begin{array}{r} 112 \\ \times 75 \\ \hline 560 \\ 784 \\ \hline 8400 \end{array}$$

45. The cost of a book is Rs. 750 with a profit of 12%.
What is the sale price of 2 such books?

- A. Rs. 700
- B. Rs. 840
- C. Rs. 1680
- D. Rs. 1690

$$\left(\frac{112}{116} \times 75 \right) \quad \text{P} = E - DA$$

$$\left(\frac{750 + 12}{116} \right) \left(\frac{112}{116} \times 75 \right) =$$

$$\left(\frac{600}{112} + 750 \right)$$

$$\left(\frac{112}{11} \times 75 \right)$$

$$\begin{array}{r} 6 \\ \times 112 \\ \hline 486 \\ 608 \\ \hline 672 \end{array}$$

$$\begin{array}{r} 112 \\ \times 6 \\ \hline 672 \end{array}$$

$$\begin{array}{r} 112 \\ \times 6 \\ \hline 672 \\ 780 \\ \hline 720 \end{array}$$

$$\begin{array}{r} 112 \\ \times 7 \\ \hline 784 \\ 672 \\ \hline 784 \end{array}$$

6. I have _____ finished my work.

- A. as
- B. just
- C. since
- D. yet

7. Which story would you like me _____ today?

- A. tell
- B. telling
- C. to tell
- D. told

8. Tomorrow morning by this time we will _____ in an airplane.

- A. flying
- B. flew
- C. fly
- D. have flown

Four lettered pairs (A to D) follow a related pair of words given in the question. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair in capital letters.

9. BIRD: BEAK::

- A. bee: hive
- B. horse: hoof
- C. man: mouth
- D. snake: poison

10. MOUNTAIN: PEAK::

- A. desert: sand
- B. river: bank
- C. sea: waves
- D. tree: top



B-22-1093-PRE-MEDICAL-WHITE-020323-31646

43. Which of the following values of heat of formation indicates that the product is least stable?

- A. -94 k cal
- B. -231 k cal
- C. +21.4 k cal
- D. +64.8 k cal

44. The enthalpy of certain reaction at 273 K is -20.75 kJ. The enthalpy of same reaction at 373 K (if heat capacities of reactants and products is same) will be:

- A. -20.75 kJ
- B. -2075 kJ
- C. Zero
- D. $-20.75 \times \frac{373}{273}$ kJ

45. Most abundant salt of sodium in nature is:

- A. NaNO_3
- B. Na_2SO_4
- C. NaOH
- D. NaCl

46. A gas that reacts with CaO and not with NaHCO_3 is:

- A. CO_2
- B. Cl_2
- C. O_2
- D. N_2

47. Which of the following statements is correct?

- A. H_3PO_3 is dibasic and reducing
- B. H_3PO_3 is tribasic and reducing
- C. H_3PO_3 is tribasic and non-reducing
- D. H_3PO_3 is dibasic and non-reducing

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Ques. Car A is moving with speed of 80 km/h and car B is moving with a speed of 100 km/h in the same direction. What is their relative speed?

- (A) 80 km/h
- (B) 100 km/h
- (C) 180 km/h
- (D) 160 km/h

D. 1030 Watt

53. The SI unit of magnetic flux is Weber. One Weber can also be expressed as _____.

- A. Joule/Ampere
 - B. Joule/meter
 - C. Newton/meter
 - D. Tesla/ m^2
- 

6. ocean winds

- A. kids: parents
- B. movie: actors
- C. loyal: state
- D. forest: bushes

— 10 —

82. Which one of the following is NOT abiotic factor?

- A. Food
- B. People
- C. Temperature
- D. Water

PHYSICS

46. What is the SI units of electric flux?

- A. Nm^2C^{-1}
- B. NmC^{-1}
- C. Nm^2C^{-2}
- D. Nm^2C^{-3}

47. What are the base units of pressure?

- A. $\text{kgm}^2\text{s}^{-2}$
- B. kgms^{-2}
- C. $\text{kgm}^2\text{s}^{-3}$
- D. $\text{kgm}^{-1}\text{s}^{-2}$

48. Plastic and synthetic rubber are examples of which type of solids?

- A. Amorphous solids
- B. Crystalloid solids
- C. Glassy solids
- D. Polymeric solids

49. Which type of interaction took place when very high energy photons such as gamma rays interact with matter?

- A. Annihilation of matter
- B. Compton effect
- C. Pair production
- D. Photoelectric effect

50. Which one of the following is a non-renewable source of energy?

- A. Coal
- B. Sunlight
- C. Tide
- D. Wind



64. Which one of the following is the SI unit of work?

- A. Coulomb
- B. Joule
- C. Meter
- D. Newton

65. A modified form of galvanometer used to measure the resistance is termed as _____.

- A. ammeter
- B. ohmmeter
- C. voltmeter
- D. Wheatstone bridge

66. Which of the following are the materials in which valance electrons are free and they can conduct electricity at normal temperatures?

- A. Conductors
- B. Insulators
- C. Semi-conductors
- D. Super conductor

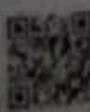
67. In electronic circuits, when there are two or more inputs for a single output, and all of them are necessary for output, the Gate used is called _____.

- A. AND Gate
- B. NAND Gate
- C. NOR Gate
- D. OR Gate

68. The mass of the body can be converted into energy by expression _____.

- A. $E=mc^2$
- B. $E=m/c^2$
- C. $E=m^c$
- D. $E=m^2c$

69. Wha



B-22-1093-PRE-MEDICAL-WHITE-020323-31646

16

CHEMISTRY

70. What will be the molecular mass of NaOH?

- A. 1
- B. 16
- C. 23
- D. 40

71. Pick the process used to separate mixture of inks on a blotting paper?

- A. Chromatography
- B. Crystallization
- C. Filtration
- D. Sublimation

72. Which one of the following law is related to the diffusion of gases?

- A. Avogadro's Law
- B. Boyle's Law
- C. Charles's Law
- D. Gram's Law

73. Conversion of liquid water into an ice in refrigerators is termed as _____.

- A. boiling
- B. evaporation
- C. freezing
- D. sublimation

74. Which of the following theories explain the shapes of molecules?

- A. Lewis Model
- B. Molecular orbital theory
- C. Valance bond theory
- D. Valence shell electron pair repulsion theory



B-22-1093-PRE-MEDICAL-WHITE-020323-31646

25. Pipe A can fill a tank in 2 hours, pipe B can fill the tank in 1 hour 30 minutes, a pipe C can fill it in 2 hours 30 minutes and pipe D can fill it in 1 hour. What is the least time in which tank will be full only when two pipes are opened?

2 hr

- A. 18 minutes ✓
- B. 36 minutes ✓
- C. 54 minutes ✓
- D. 150 minutes ✓

$\frac{60}{60} = \frac{1}{1}$

1 hr . 30

$\frac{120}{60} = \frac{2}{1}$

1

26. Ahmed and Fahad together have Rs. 1210. If $\frac{6}{15}$ of Ahmed's amount is equal to $\frac{3}{5}$ of Fahad's amount, how much amount does Ahmed have?

- A. Rs. 450 ✓
- B. Rs. 484
- C. Rs. 720
- D. Rs. 726

$$5 \sqrt{1210} \\ \underline{-5} \quad \underline{71} \\ \underline{\cancel{25}} \quad \underline{21} \\ \underline{21}$$

$$= \frac{3}{5} \times 1210 = 245$$

27. The sum of, sum and product of roots of the equation $3x^2 + 7x - 1 = 0$ is _____.

- A. $-8/3$ ✓
- B. -2
- C. 2
- D. $8/3$ ✓

$$3 \sqrt{245} \quad \frac{7}{3} + \frac{1}{3} \\ = \frac{6 \times 1210}{18} \quad \frac{245}{3}$$

$$\frac{1210}{245}$$

28. The sum of two numbers is 25 and their difference is 75 the ratio of two numbers is _____.

- A. -1:2 ✓
- B. 1:2 ✓
- C. 1:3
- D. 13:6 ✓

$$7210 \quad 245 = \frac{6}{15} - \frac{3}{5} \\ 490 \quad \underline{2720} \\ \underline{2} \quad \underline{490}$$

$$\begin{array}{r} 6 \times 1210 \\ \hline 15 \\ 3. \end{array}$$

$$\begin{array}{r} 25 \\ 13 \\ 75 \\ 1210 \\ 490 \\ \hline 720 \end{array}$$

$$x+y=25$$

$$x-y=75$$

$$\begin{array}{r} 5 \mid 15, 5 \\ 3 \mid 3, 1 \end{array}$$

$$\begin{array}{r} 23 \\ \hline 185 \\ 5 \end{array}$$

$$25 : 75$$

$$\boxed{1 : 3}$$

$$\frac{6x-3x}{15} \\ \frac{6-15}{15}$$

Four lettered pairs (A to D) follow a related pair of words given in the question. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair in capital letters.

16. FLOWER: BUNCH::

- A. captain: team
- B. man: men
- C. manager: business
- D. ship: fleet

17. BLACKSMITH: IRON::

- A. cook: kitchen
- B. farmer: grower
- C. potter: clay
- D. shoemaker: cobbler

COW: CALF::

- A. dog: bark
- B. fish: water
- C. horse: foal
- D. tortoise: shell

ISE: FOOLISH::

- A. bold: brave
- B. free: fair
- C. simple: easy
- D. single: many

20. COMPUTER: MONITOR::

- A. bicycle: wheel
- B. pencil: eraser
- C. purse: money
- D. road: traffic



"A most terrible thing happened at the riverbank," he answered softly. "A hawk suddenly swooped down and carried off your son. I could do nothing to help him." What a liar you are! How could a hawk carry off a boy as big as my son? Laeeq said angrily. Nadir looked at his friend straight in the eyes. "Well, my dear friend, Laeeq," he said calmly, "if mice can eat silver, then hawks can carry off boys." For a while Laeeq said nothing. Then he knew that Nadir had tricked him just as he had tricked Nadir. So, he said, "Give me back my son and I will give you back your bar of silver."

22. Nadir had to travel abroad in order to _____

- A. earn some money
- B. get a bar of silver
- C. meet his relatives
- D. visit a holy place

23. Nadir left his bar of silver with Laeeq because he _____ him.

- A. believed
- B. feared
- C. loved
- D. trusted

24. When Laeeq refused to return his bar of silver Nadir did NOT become _____.

- A. afraid
- B. angry
- C. silent
- D. tired

25. Laeeq was a _____ man.

- A. caring
- B. dishonest
- C. poor
- D. stupid

CHEMISTRY

54. Which one of the following chemical products is being used for refining of sugar and other food products?

- A. Brine solution
- B. Gypsum
- C. Lime
- D. Nitric acid

55. Sodium chloride is NOT soluble in _____.

- A. Acetic acid
- B. Dimethyl ether
- C. Ethanol
- D. Water

56. Sodium dichromate can be converted into potassium dichromate by reacting it with _____.

- A. NaCl
- B. NaBr
- C. KCl
- D. MgCl₂

57. Which one of the following are network covalent type of solids with very strong covalent bond?

- A. Diamond
- B. Magnesium oxide
- C. Rhombic Sulphur
- D. Sodium

58. Which product will be released at anode if we electrolyzed aquas solution of H₂SO₄?

- A. H₂
- B. O₂
- C. S₈
- D. SO₂



F-23-1131-PRE-MEDICAL-PINK-291023-31968

10

22. There were 20 boys and 10 girls in a class. What is the probability of selecting a girl or a boy as a monitor?

- A. $1/30$
- B. $1/3$
- C. $2/3$
- D. 1 ✓

$$= \frac{36}{36}$$

← You



January 16, 11:37 AM

QUANTITATIVE REASONING

21. The value x in the linear equation

$$\frac{3x}{2} - \frac{x-2}{3} = \frac{13}{2}$$

_____.

- A. -3
- B. -5
- C. 3
- D. 5

22. Pipe A can fill a tank in 30 minutes and pipe B can fill the tank in 50 minutes. In how much time the tank will be full if both pipes open together?

- A. 18 minutes
- B. 18 minutes 45 seconds
- C. 30 minutes
- D. 80 minutes

23. The sale price of a book is Rs. 630 with a profit of 10%. What is the cost price of book?

- A. Rs. 595
- B. Rs. 600
- C. Rs. 610
- D. Rs. 661

24. If $f(x) = x^2 + 5kx + 70$ and $f(-3) = 4$ then value of k is

- A. -5
- B. -47/5
- C. 5
- D. 47/5

33. A coin is tossed twice. The probability of getting doublets is _____.

- A. $\frac{1}{4}$
- B. $\frac{1}{2}$
- C. $\frac{3}{4}$
- D. 1

23. What is the next term in the sequence 1, 2, 4, 7, 11, 16,
22, 29?

- A. 37
- B. 39
- C. 41
- D. 57

24. What is the angle between the hands of a clock at
6 O'clock?

- A. 90°
- B. 120°
- C. 150°
- D. 180°

~~72~~
~~360°~~
~~8~~
78. Sum of interior angles of octagon is _____.

- A. 540°
- B. 720°
- C. 900°
- D. 1080°

$$\begin{array}{r} 8 \\ \times 6 \\ \hline 48 \end{array}$$

$$\begin{array}{r} 6 \\ \times 27 \\ \hline 108 \end{array}$$

79. 60% of what number is 270?

- A. 200/9
- B. 162
- C. 450
- D. 475

80. In 7096, the sum of place and face value of 7 is _____.

- A. 14
- B. 77
- C. 7007
- D. 14000



F-23-1132-HAT-MS-III-BLUE-291023-31988



C. 30 cm

D. 40 cm

11. $\omega^{88} = ?$

A. 1

B. ω^2

C. ω

D. 0

12. $\omega^n = ?, \text{ when } n = 3k$

A. 0

B. ω

C. 1

D. $\frac{1}{\omega}$

13. The number of real roots in cube roots of
8 is?

A. Two

B. One

25. Pipe A can fill a tank in 2 hours, pipe B can fill the tank in 1 hour 30 minutes, a pipe C can fill it in 2 hours 30 minutes and pipe D can fill in 1 hour. What is the least time in which tank will be full only when two pipes are opened?

2 hr

- A. 18 minutes ✓
- B. 36 minutes ✓
- C. 54 minutes ✓
- D. 150 minutes ✓

60

60

120

1 hr . 30

2 hr 30

1

QUANTITATIVE REASONING

21. The value x in the linear equation

$$\frac{3x}{2} - \frac{x-2}{3} = \frac{25}{2}$$

- A. -3
- B. -5
- C. 3
- D. 5

88. A factory worker can produce 12 toys every hour. If there are 42 workers in the factory, how many toys will be produced every hour?

- A. 147 toys
- B. 1176 toys
- C. 200 toys
- D. 150 toys
- E. 400 toys

89. If $p - 7 = 5 - p$, then $p =$

- A. -6
- B. -2
- C. 1
- D. 6
- E. 12

90. Muzamil's quiz scores in mathematics were 80, 82, 85, 86, and 88.

60. What was the average of his scores?

- A. 80.2
- B. 81
- C. 81.5
- D. 82
- E. 84

91. $(a - b)^2 =$

- A. $a^2 - b^2$
- B. $a^2 + b^2$

51. The measurement of wavelength and intensities of electromagnetic radiation emitted or absorbed by atom is known as _____ spectra.

- A. atomic
- B. light
- C. molecular
- D. solar

52. A 70 Kg boy runs up hill through height of 3m in 2s, what will be average power?

- A. 850 Watt
- B. 930 Watt
- C. 1010 Watt
- D. 1030 Watt

53. The SI unit of magnetic flux is Weber. One Weber can also be expressed as _____.

- A. Joule/Ampere
- B. Joule/meter
- C. Newton/meter
- D. Tesla/ m^2



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PHYSICS

42. $2x + 5y = -kx$, if $x = 2$ and $y = -1$ then value of k is _____.

A. -2
B. $1/2$
C. 2
D. 3

43. The range of the data 3, 5, 4, 6, 9, 17, 12, 15 is _____.

A. 03
B. 05
C. 14
D. 20

44. Write the statement in the form of equation, "Subtract 8 from 4 times a number to get -6".

A. $-4x + 8 \approx 6$
B. $4x - 8 = 6$
C. $-4x + 8 = -6$
D. $4x - 6 = -8$

45. The range of $f(x) = \frac{x^2 - 5}{x + \sqrt{5}}$ is _____.

A. $\{\sqrt{5}\}$
B. real numbers
C. real numbers $\{-2\sqrt{5}\}$
D. real numbers $\{-\sqrt{5}\}$

50. A device which converts alternating current into pulsating current/voltage is known as _____.

A. amplifier
B. diode
C. rectifier
D. transistor

P-22-1074-PARTICAL-YELLOW P-22-1074-E-MEDICAL-YELLOW

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QUANTITATIVE REASONING

21. A boy cycles for 4 hours with a speed of 6km/h and covers 9km by foot in 7 hours. The average speed of boy is _____.

- A. 3.0 km/h
- B. 3.5 km/h
- C. 7.3 km/h
- D. 8.25 km/h

$$S = \frac{15}{11}$$

$$\begin{array}{r} 1.4 \\ 11 \sqrt{15} \\ \underline{-11} \\ 40 \end{array}$$

22. There were 20 boys and 10 girls in a class. What is the probability of selecting a girl or a boy as a monitor?

- A. $\frac{1}{30}$
- B. $\frac{1}{3}$
- C. $\frac{2}{3}$
- D. 1 ✓

$$= \frac{36}{36}$$

23. The arithmetic mean of 10 values is 50. If -27 is added to data. Then new arithmetic mean is _____.

- A. 23
- B. 38.5
- C. 43
- D. 47.3

$$10 = 50$$

$$10 - 27 = 50$$

24. An amount of Rs. 19000 was invested at a rate of 6% for 4 years on simple interest basis. The total amount in the bank account after 4 years is _____.

- A. Rs. 22000
- B. Rs. 23500
- C. Rs. 23560
- D. Rs. 80560

$$\begin{array}{r} 27 \\ 10 \\ \hline 17 \end{array}$$

25. The age of father is 4 times the age of his son. 3 years ago, the age of father was 5 times the age of his son. The present age of father is _____.

- A. 10 years
- B. 24 years
- C. 48 years
- D. 60 years

$$\begin{aligned} F &= 4S \\ F-3 &= (S-3)5 \\ 4S-3 &= 5S-15 \end{aligned}$$



5. SINGULAR: PLURAL::

- A. below: beneath
- B. haughty: vain
- C. least: most
- D. lift: soar

6. OCEAN: WEEDS::

- A. kids: parents
- B. movie: actors
- C. loyal: state
- D. forest: bushes

7. FINGER: GUITAR::

- A. beak: bird
- B. level: vertical
- C. snake: mice
- D. stick: drum

8. TEETH: BITE::

- A. knife: cut
- B. tree: green
- C. drop: ocean
- D. language: alphabet

9. SUMMARY: PRECIS::

- A. ladle: pan
- B. monitor: screen
- C. order: obedience
- D. reverse: push

Questions 10-15
After years of

- C. 720°
- D. 1080°

39. The amplitude of function $6\sin(3x + 5)$ is _____.

- A. $-5/3$
- B. -5
- C. 06
- D. 2π

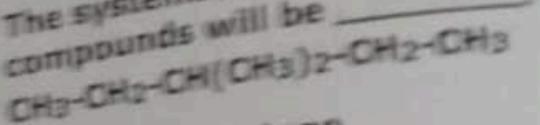
40. If $x^3 - 2x^2 - 5x + 16$ is divided by $2x - 6$ then remainder is _____.

- A. -14
- B. 0
- C. 10
- D. 15

41. The sum of the place and face value of 6 in number 54689 is _____.

- A. 0
- B. 594
- C. 600
- D. 606

BD. The systematic IUPAC name of the following compounds will be _____



- A. 3-Pantane
- B. 5, 5-dimethyl Pentane
- C. 3-methylPantane
- D. 3, 3-dimethyl Pentane

13. In a tournament 8 teams were playing. Each team has to play a match with every other team. Two semifinals and one final are played. How many total matches were played?

- A. 25
- B. 28
- A. 31
- B. 34

48. Pipe A can fill a tank in 2 hours, Pipe B can fill the tank in 1 hour 30 minutes and a Pipe C can fill it in 2 hours 20 minutes. Which pipe(s) is/are more efficient?

- A. Pipe A
- B. Pipe B
- C. Pipe C
- D. Both A and C

49.

11. Ahmed has $\frac{95}{3}$ liters of paint. After using $\frac{59}{12}$ liters in room and $\frac{37}{12}$ liters in kitchen, how much paint is left?

- A. $\frac{7}{12}$ liters
- B. $\frac{5}{3}$ liters
- C. $\frac{71}{6}$ liters
- D. $\frac{71}{3}$ liters

12. Sum of roots of $9x^2 + 21x - 8 = 0$ is _____.

- A. $-\frac{7}{3}$
- B. $-\frac{8}{9}$
- C. $\frac{8}{9}$
- D. $\frac{7}{3}$

44. Pipe A can fill a tank in 45 minutes. If both pipes A and B are opened the tank is full in 15 minutes. In how much time tank will be full if pipe B is opened?

- A. 20 minutes
- B. 22.5 minutes
- C. 30 minutes
- D. 35.5 minutes

at -.

- A. 360°
- B. 600°
- C. 720°
- D. 1080°

33. The amplitude of function $6\sin(3x + 5)$ is _____.

- A. $-5/3$
- B. -5
- C. 06
- D. 2π

40. If $x^3 - 2x^2 - 5x + 16$ is divided by $2x - 6$ then remainder is _____.



TECNO CAMON
AI TRIPLE CAMERA

B. 0

14. The angle between the hands of a clock at 4:30 is _____.

- A. 30°
- B. 35.5°
- C. 37.5°
- D. 40°

22. Pipe A can fill a tank in 30 minutes and pipe B can fill the tank in 50 minutes. In how much time the tank will be full if both pipes open together?

- A. 18 minutes
- B. 18 minutes 45 seconds
- C. 30 minutes
- D. 80 minutes

36. If $a + b = 10$ and $a - b = 6$, then the value of ab is

- A. 16
- B. 32
- C. 48
- D. 64

37. The value of m in the ratio $3:m+7 = 9:12$ is

- A. -11
- B. -3
- C. 3
- D. 11

29. The sale price of an article is Rs. 3597 with a profit of 9%. The cost price of article is _____.

- A. Rs. 310.50
- B. Rs. 3197.33
- C. Rs. 3250
- D. Rs. 3300

Choose the lettered word or phrase that is NEARLY SIMILAR in meaning to the word in capital letters.

6. The AUDIENCES are _____ of a performance.

- A. enemies
- B. organizers
- C. players
- D. viewers

7. If something DEVELOPS it _____.

- A. falls
- B. grows
- C. performs
- D. stops

Choose the lettered word or phrase that is NEARLY OPPOSITE in meaning to the word in capital letters.

8. He is a SHREWD fellow and not _____.

- A. cooperative
- B. cruel
- C. dull
- D. honest

9. DOWDY atmosphere is not _____.

- A. calm
- B. cheerful
- C. dangerous
- D. healthy

36. If $a + b = 10$ and $a - b = 6$, then the value of ab is

- A. 16
- B. 32
- C. 48
- D. 64

37. The value of m in the ratio $3:m-7 = 9:12$ is

- A. -11
- B. -3
- C. 3
- D. 11

D. 5.5

57. What amount is invested in the bank to get a profit of
Rs. 3500 at a rate of 7% for 4 years?

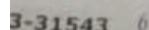
- A. 10000
- B. 12500
- C. 15000
- D. 16500

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P-22-1074-PRE-MEDICAL-YELLOW-080123-31543



D. 11

34. The cost price of 8 suits is Rs. 13400. What is the cost price of such 5 suits?

- A. Rs. 8000
- B. Rs. 8275
- C. Rs. 8375
- D. Rs. 8425

35. The sale price of an article is Rs. 3597 with a profit of 9%. The cost price of article is _____.

- A. Rs. 310.50
- B. Rs. 3197.33
- C. Rs. 3250
- D. Rs. 3300

36. Pipe A can fill a tank in 15 minutes. If both pipes A and

D. 22 more
28. If $f(x) = 5a$ then it is called _____ function.

- A. constant
- B. identity
- C. one-one
- D. quadratic

to -2, -3 is

(C) 81.2

(E) 812

13. Ali and Omer share an apartment. If each month Ali pays x dollars and Omer pays y dollars, what percent of the total cost does Ali pay?

(A) $(x + y)100$

(B) $\frac{x}{y} \%$

(C) $\frac{100x}{y} \%$

(D) $\frac{100x}{x + y} \%$

(E) $\frac{100}{xy} \%$

14. There are 240 seats in the balcony of a theater. The number of seats in each row is 14 more than the number of rows. Find the number of rows.

(A) 6

(B) 8

(C) 10

(D) 12

(E) 24

15. Which of the following cannot be expressed as the sum of three consecutive integers?

(A) 27

(B) 26

(C) 21

(D) 42

(E) 39

16. 6 men can do a piece of work in 12 days. How many men are needed to do the work in 18 days?

(A) 2 men

(B) 6 men

(C) 4 men

(D) 3 men

(E) 5 men

17. What is the value of x if $3^{x+1} = 243$?

(A) 3

(B) 5

(C) 7

(D) 4

(E) 2

18. A lighthouse blinks regularly 5 times.

D. -1

9. Two natural numbers whose sum is 25 and difference is 5, are
A. 25, 20 B. 20, 10
C. 20, 5 D. 15, 10
10. The length of rectangle is twice as much as its breadth. If the perimeter is 120 cm, the length of the rectangle is
A. 10 cm B. 20 cm

98
was 3 time as old as his son. How old is the son now?

- A. 18 years B. 36 years
C. 8 years D. 16 years
15. The two consecutive positive integers whose product is 56 are
A. 7, 8 B. 14, 4
C. 28, 2 D. 56, 1

If $\tan A = 5/4$ then $\cot B = \underline{\hspace{2cm}}$.

- A. $4/5$
- B. $5/4$
- C. 4
- D. 5

- 12. A garrison has provision for 12 days for 1000 men. At the end of 2 days 200 more men were admitted. How long will the food now last?**
- A. 8 days B. 8.33 days C.9 days D.9.33 days**

- B. -3
- C. 03
- D. 07

29. Which of the following is an irrational number?

- A. 1.345345345...
- B. $\sqrt{5}$
- C. 18.33333333
- D. 35

... to Rs. 660 with a profit of

30. If $f(x) = x^2 + 5kx - 70$ and $f(-3) = -1$ then value of k is _____.

A. $-62/15$

B. -4

C. 4

D. $62/15$

$$= 9 - 15 - 70$$

$$= 9 - 85$$

$$\begin{array}{r} -8 \\ \hline 9 \\ \hline 76 \end{array}$$

25
QUANTITATIVE REASONING

$$76. \frac{3}{5} + \frac{6}{5} = \frac{7}{15} + \frac{3}{20} = \frac{5}{6} - \frac{7}{15} + \frac{3}{20}$$

$\frac{90}{481} \times \frac{2}{50} = \frac{18}{962} \times \frac{1}{37} = \frac{2}{60}$

A. $-\frac{49}{60}$
 B. $-\frac{7}{60}$
 C. $\frac{11}{60}$
 D. $\frac{49}{60}$

77. In a football league, 9 teams were playing. How many matches were played if every team had to play one match with every other team?

- A. 20
 B. 36
 C. 72
D. 81

78. Sum of interior angles of octagon is _____.

- A. 540°
 B. 720°
 C. 900°
 D. 1080°

79. 60% of what number is 270?

- A. $200/9$
B. 162
 C. 450

37. A dice is rolled twice. The probability of getting a sum of 6 on dice is _____

A. $\frac{1}{36}$

B. $\frac{1}{18}$

C. $\frac{5}{36}$

D. $\frac{1}{6}$

$$\frac{360}{330} = \frac{n(n+1)}{6 \cdot 130} = \frac{n(n-1)}{2}$$

- B. $\frac{2}{5}$
- C. $\frac{5}{3}$
- D. 5

If $\tan A = \frac{5}{4}$ then $\cot B = \underline{\hspace{2cm}}$.

- A. $\frac{4}{5}$
- B. $\frac{5}{4}$
- C. 4
- D. 5

44. What is the next term in the sequence - 2, 0, 18, 108,
486, _____. 18

- A. 1856
- B. 1890
- C. 1924
- D. 1944

$$\left(\frac{12}{108} \times 75 \right) \quad \begin{array}{r} 112 \\ 75 \\ \hline 1560 \\ 784 \\ \hline 6 \end{array}$$

45. The cost of a book is Rs. 750 with a profit of 12%.
What is the sale price of 2 such books?

- A. Rs. 700
- B. Rs. 840
- C. Rs. 1680
- D. Rs. 1690

$$\left(\frac{750+12}{112} \left(\frac{112}{112} \times 75 \right) \right) \quad \begin{array}{l} \phi = E - DA \\ = 168 \end{array}$$

$$\left(\frac{600}{112} + 750 \right) \quad \begin{array}{r} 112 \\ 486 \\ \hline 6 \\ 608 \\ \hline 672 \\ A 37 \end{array}$$

$$\begin{array}{r} 112 \\ 672 \\ \hline 672 \end{array}$$

$$\begin{array}{r} 112 \\ 1 \\ \hline 1 \end{array}$$

$$112 \sqrt{75600} \quad \begin{array}{r} 6 \\ 672 \\ \hline 780 \\ 56 \\ \hline 56 \end{array}$$

$$184 \quad \begin{array}{r} 112 \\ 7 \\ \hline 672 \\ 780 \\ \hline 672 \\ 672 \\ \hline 0 \end{array}$$

87. If $5x + 7y = 17$ and $3x + 9y = 11$ then value of $x + 2y$
 $= \underline{\hspace{2cm}}$.

$$\begin{array}{r} 5x + 7y = 17 \\ 3x + 9y = -11 \\ \hline -2x - 2y = 6 \end{array}$$

$\frac{6}{-2(x+y)}$

A. -7
B. $\frac{-7}{2}$
C. $\frac{7}{2}$
D. 7

88. The average of supplementary angles is $\underline{\hspace{2cm}}$.
- A. 0°
B. 45°
C. 90°
D. 180°
- $\frac{360^\circ}{2}$

89. The sum of first 20 natural numbers is $\underline{\hspace{2cm}}$.
- A. 190
B. 200
C. 210
D. 220
- $\frac{s}{20} a (1 - r^n) / (1 - r)$

90. Car A is moving with a speed of 110 km/h in the opposite direction of car B, which is moving with a speed of 50 km/h. What is their relative speed?
- A. 50 km/h
B. 60 km/h
C. 110 km/h
D. 160 km/h
- 160

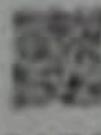
91. The sale price of shirt is Rs 736 with a loss of 8% . The cost price of shirt is $\underline{\hspace{2cm}}$

← You → ⋮

36. January 16, 11:37 AM



- A. 16
B. 32
C. 48
D. 64
37. The value of m in the ratio $3:m = 2:9$ is _____
A. -11
B. -3
C. 3
D. 11
38. The linear equation $3x = 10$ represents _____
A. horizontal
B. oblique
C. vertical
D. y-axis
39. If $A:B = 5:7$ and $C:B = 5:7$ then $A:B:C =$ _____
A. 5:7:5
B. 7:5:7
C. 25:35:40
D. 49:35:25
40. $38 - [36 - 2(5 + 7 + 6)] \div 4 =$ _____
A. $5/2$
B. 7
C. 31
D. 32
41. If the cost of 2 hens and 3 goats is Rs. 47000 and the cost of 5 hens and 1 goat is Rs. 20000. What is the cost of one hen?
A. Rs. 1000
B. Rs. 15000
C. Rs. 16000
D. Rs. 20000



87. If $5x + 7y = 17$ and $3x + 9y = 11$ then value of $x + 2y$
= _____.

$$5x + 7y = 17$$

A. -7

B. $\frac{-7}{2}$

C. $\frac{7}{2}$

D. 7

$$3x + 9y = 11$$

$$-2x - 2y = 6$$

$\frac{16}{-2}$

$(x - y)$

D. 150 minutes

26. Ahmed and Fahad together have Rs. 1210. If $\frac{6}{15}$ of Ahmed's amount is equal to $\frac{3}{5}$ of Fahad's amount, how much amount does Ahmed have?

- A. Rs. 450
- B. Rs. 484
- C. Rs. 720
- D. Rs. 726

$$5 \overbrace{1210}^{245} \begin{matrix} 245 \\ -10 \\ \hline 14 \\ -10 \\ \hline 40 \\ -40 \\ \hline 0 \end{matrix}$$

$$\begin{array}{r} 245 \\ \times 3 \\ \hline 735 \end{array}$$

92. A man covers some distance in 5 hours. If he moves faster by 4 km/h, he will cover the same distance in 3 hours. Find the distance covered by the man.

- A. 15 km
- B. 24 km
- C. 30 km
- D. 26 km

$$\frac{5h}{3h} d = \frac{4 \text{ km}}{(t)} \quad 4 \\ -5 \quad -5 \\ \underline{d = \frac{4 \times 3}{4 - 3}}$$

93. Value of the determinant of matrix $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$ is

- A. -2
- B. 0
- C. 1
- D. 2

94. The sum of two-digits of a number is 9. If the digits are interchanged the new number so formed is 45 greater than the original number. The original number is

- A. 27
- B. 36
- C. 45
- D. 72

$$x + y = 9$$

45

45

28

95. Sum of roots of the equation $7x^2 - 13x - 40 = 0$ is

- A. $-40/7$
- B. $-13/7$
- C. $13/7$
- D. $40/7$



F-23-1132-HA1



- A. 10 years
 B. 24 years
 C. 48 years
 D. 60 years

$$F = 45 \\ F - 3 = (S - 3)5 \\ 45 - 3 = 5S - 15$$



26. $24 - 32 \div \{41 - 25\} - 2 \times 8 = \underline{\hspace{2cm}}$

- A. -3
 B. 0
 C. 6
 D. 9

$$\begin{array}{l} [24 - 2 - 2 \times 8] + 3 \\ [24 - 2 - 18] + 3 \\ \hline 41 \\ 25 \\ \hline 19 \end{array}$$

27. Calculate the area of a right triangle, whose base length is 5cm and length of hypotenuse is 13cm.

- A. 30 cm^2
 B. 32.5 cm^2
 C. 60 cm^2
 D. 65 cm^2

28. If $m + n + p = 8$ and $m^2 + n^2 + p^2 = 20$, then the value of $mn + np + mp = \underline{\hspace{2cm}}$.

- A. -12
 B. 12
 C. 22
 D. 44

29. If $(x + 2)$ is a factor of $3x^2 - 4kx - 4k^2$, then the value of k is $\underline{\hspace{2cm}}$.

- A. -3
 B. -1
 C. 1
 D. 2

30. Solution of the equation $\sqrt{5x - 6} - \sqrt{x + 10} = 0$ is $\underline{\hspace{2cm}}$.

- A. -4
 B. 0
 C. 4
 D. 8

$$\begin{array}{r} 23 \\ 15 \\ 38 \\ \hline 10 \end{array} \quad \frac{n}{1(n-1)} \quad \begin{array}{r} 20 \\ 10 \\ 20 \times 10 \\ \hline 10 \end{array}$$

31. To increase the tourism the government has to construct a road of 86 kms long. 39 kms of the road is

[← You](#)

January 16, 11:37 AM

16. Factors of $x^2 + 4x^2 - 23x = 0$ are _____.

- A. -7, -3, 0
- B. -7, 3, 0
- C. -3, 7, 0
- D. 3, 7, 0

17. Two dice are rolled. What is the probability of getting same faces on top?

- A. 5/36
- B. 1/6
- C. 7/36
- D. 1

18. Ahmed added two containers of paint containing 40 liters and 55 liters of paint. After using 49.3 liters in room and 34.7 liters in kitchen, how much paint is left?

- A. 10 liters
- B. 11 liters
- C. 12 liters
- D. 21 liters

19. If $f(x) = 5x$ then it is called _____ function.

- A. constant
- B. identity
- C. one-one
- D. quadratic

20. The sale price of a book is Rs. 856 with a profit of 7%. What is the cost price of book?

- A. Rs. 795
- B. Rs. 796.08
- C. Rs. 800
- D. Rs. 805

← You (n+5) 3n-1
53 photos • Tuesday

$$\frac{8n+3-4n+8}{2n+10+3n-1}$$

$$\begin{array}{r} 8n+11 \\ 5n+9 \\ \hline 3^2 = 9 \end{array}$$

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34. The roots of the equation $x^2 + x + 1 = 0$ are _____.
(Where w is a cube root of 1).

- A. 1, w, w^2 ✓
- B. w, w^2 ✓
- C. 1, w^2 ✓
- D. 1, w

$$\begin{aligned} x^2 + 1x - x + 1 &= 0 \\ x(x+1) - 1(x+1) &= 0 \\ (x-1)(x+1) &= 0 \end{aligned}$$

35. Number 5 in 94.60572 is at _____ place.

- A. hundredths ✓
- B. ones ✓
- C. tenths ✓
- D. thousandths

$$\begin{array}{r} x=1 \\ 30 \\ 8 \\ \hline 24 \end{array}$$

36. In a tournament 8 teams were playing. Each team has to play one match with every other team. The total number of matches that were played are _____. 11

- A. 25
- B. 28 ✓
- C. 56
- D. 64 ✓

$$\begin{aligned} 30 \times 8 - \frac{11}{2} \times 26 &= 110 \\ = 240 - 110 &= 130 \\ \frac{110}{2} &= 55 \end{aligned}$$

37. A dice is rolled twice. The probability of getting a sum of 6 on dice is _____. 350

- A. $1/36$
- B. $1/18$ ✓
- C. $5/36$
- D. $1/6$ ✓

$$\frac{n(n+1)}{36} = \frac{n(n-1)}{2}$$

38. What is the angle between the hands of clock at 20 minutes to 8 O'clock? 490

The sum of the series $2 + \frac{2}{3} + \frac{2}{9} + \dots$ is _____.

- A. 2
- B. 3
- C. 3.4
- D. 3.5

97. The number p is 4 more than 3 times the number r . The sum of number p and r is 10. Which of the following pair of equations could be used to find the values of p and r ?

- A. $P = 3r + 4; p + r = 10$
- B. $P = 3r + 4; pr = 10$
- C. $P = 3(r + 4); p + r = 10$
- D. $P + 4 = 3r; p + r = 10$
- E. $P + 4 = 3r; pr = 10$

98. What is the angle between two hands of the clock at 12' O'clock?

- A. 90°
- B. 180°
- C. 60°
- D. 120°
- E. 0°

99. Which of the following is the factor of $3x^3 - 11x^2 - 42x$?

- A. $x - 7$
- B. x
- C. $x + 6$
- D. $3x - 6$
- E. $3x^2 - 11x$

100. A circle with a radius 3 feet has a circumference how many feet long?

- A. 3π
- B. 6π
- C. 9π
- D. 12π
- E. $3/2\pi$

$$\text{Let } w = z^3 = 1$$

$$z^3 = 1$$

$$z^3 - 1 = 0 \Rightarrow z^3 - (1) = 0$$

$$\therefore (z-1)(z^2 + z + 1) = 0$$

$$\boxed{z=1}$$

$$\boxed{z^2 + z + 1}$$

$$\boxed{?? ??}$$

$$z^2 + z + 1 = 0$$

$$a=1, b=1, c=1$$

$$x = \frac{-1 \pm \sqrt{1-4}}{2(1)}$$

$$= \frac{-1 \pm \sqrt{-3}}{2}$$

$$x = \boxed{\frac{-1 \pm i\sqrt{3}}{2}}$$

$$\rightarrow 1^{\text{st}} \text{ Root} = w = \frac{-1 + \sqrt{3}i}{2}$$

$$2^{\text{nd}} \text{ Root} = w^2 = \frac{-1 - \sqrt{3}i}{2}$$

option B

34. The roots of the equation $x^2 + x + 1 = 0$ are _____.
(Where w is a cube root of 1).

- A. 1, w, w^2
- B. w, w^2
- C. 1, w^2
- D. 1, w

$$\begin{aligned}x^2 + x + 1 &= 0 \\x(x+1) - 1(x+1) &= 0 \\(x-1)(x+1) &= 0\end{aligned}$$