MODEL QUESTION PAPER

PART 'A' GENERAL APTITUDE

(logical reasoning, graphical analysis, analytical and numerical ability, quantitative comparisons, series formation, puzzles, etc.)

www.ErForum.Net

1. A sphere of radius 4 cm is carved from a homogeneous sphere of radius 8 cm and mass 160 g. The mass of the smaller sphere is

   1. 80 g.
   2. 60 g.
   3. 40 g.
   4. 20 g.

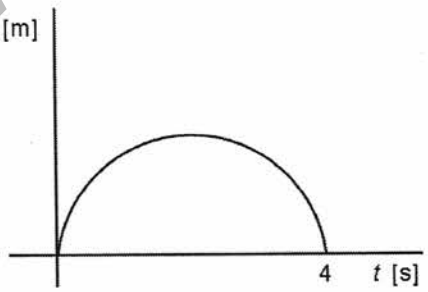
2. Two boys A and B are at two diametrically opposite points on a circle. At one instant the two start running on the circle; A anticlockwise with constant speed v and B clockwise with constant speed $2v$. In 2 minutes, they pass each other for the first time. How much later will they pass each other for the second time?

   1. 1 minute
   2. 2 minutes
   3. 3 minutes
   4. 4 minutes

3. There are k baskets and n balls. The balls are put into the baskets randomly. If $k < n$,

   1. There is no empty basket
   2. There are exactly $(n-k)$ baskets with at least one ball
   3. There is at least one basket with two or more balls
   4. There are $(n-k)$ baskets with exactly two balls

4. An ant is crawling along the x-axis such that the graph of its position on the x-axis versus time is a semi-circle (see figure). The total distance covered in the 4 s is



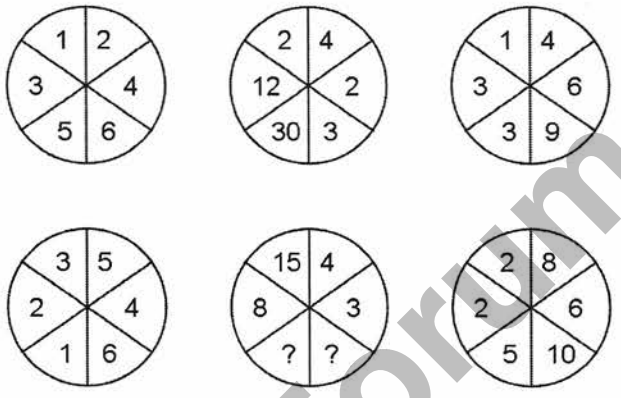
   1. 4 m
   2. 2 m
   3. 2π m
   4. 4π m

www.IrForum.Net

5. In a bag containing only blue, red and green marbles, all but 15 are blue, all but 13 are red and all but 12 are green. How many are red?

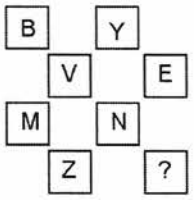
1. 13
2. 7
3. 25
4. 20

6. Find the missing numbers in the bottom middle circle. (Clue: left halves of the central circles relate to the left circles and the right halves to the right circles)



1. 10, 20
2. 15, 15
3. 21, 2
4. 6, 2

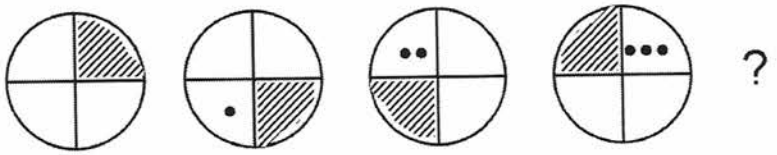
7. Identify the missing letter.

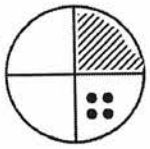
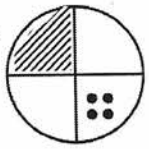
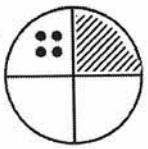
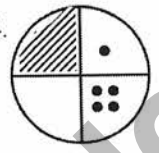


1. W
2. A
3. X
4. B

www.ErForum.Net

8. Identify the figure that comes next in the sequence.



1. 
2. 
3. 
4. 

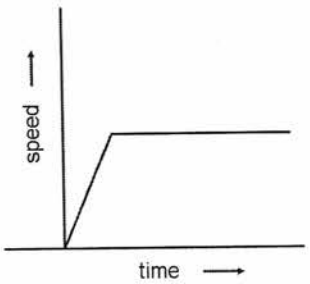
9. A person buys a shirt with marked price Rs.300/- at 20% discount. In order to make a profit of 20% the person should sell the shirt for

1. Rs. 288/-
2. Rs. 300/-
3. Rs. 240/-
4. Rs. 360/-

10. A uniform cylindrical container is half filled with water. The height of the cylinder is twice its diameter. The cylinder is gradually tilted until the water touches the brim. At this instant, the container is inclined at

1. 30° to vertical
2. 45° to vertical
3. 60° to vertical
4. 75° to vertical

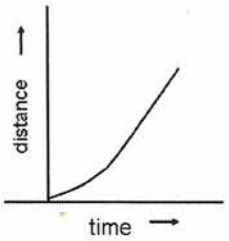
11. A car is moving along a straight road. The graph below shows how the speed varies with time.



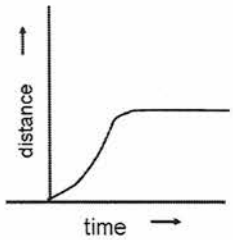
Which of the following graphs represents the distance covered by the car with time?

www.ErForum.Net

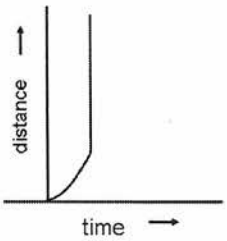
1.



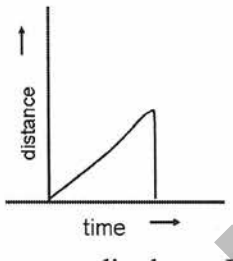
2.



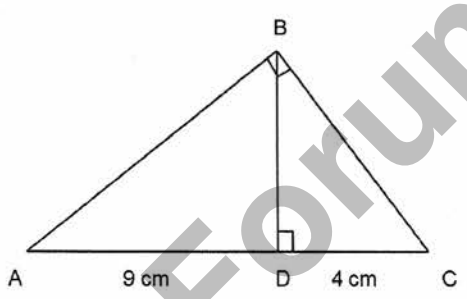
3.



4.



12. In triangle ABC, shown in the figure, AB is perpendicular to BC. Further, BD is perpendicular to AC. If AD = 9 cm and DC = 4 cm, the length BD is



1. 6 cm
2. 6.5 cm
3. $\frac{36}{13}$ cm
4. $\frac{13}{36}$ cm

13. A box of sticks of equal lengths is provided. The minimum number sticks needed to build a frame to enclose a 3 dimensional volume is

1. 6
2. 12
3. 3
4. 8

www.ErForum.Net

14. 5 kg of adulterated rice has 2% stones in it and the rest is rice. Half of the stone content was removed. Now the percentage of stone content in it is

1. 0.99%
2. 1%
3. 1.1%
4. 1.01%

15. A coin is tossed six times. The probability that heads will occur at least once is

1. $\frac{63}{64}$.
2. $\frac{1}{3}$.
3. $\frac{1}{64}$.
4. $\frac{3}{2}$.

16. Two parameters TC and TF are related as shown in the table. Find the value of TF corresponding to a TC of 75.

TC	0	25	50	75	100
TF	32	77	122	?	212

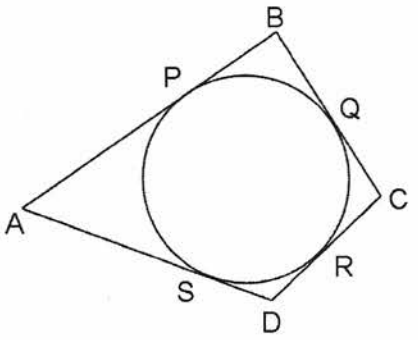
1. 167
2. 162
3. 150
4. 200

17. Several identical cubes are arranged in a close-packed single layer. If the area of the layer is A and the volume of the layer is V, then the number of cubes in the collection is

1. V/A.
2. A^3/V^2.
3. V^2/A^3.
4. A/V.

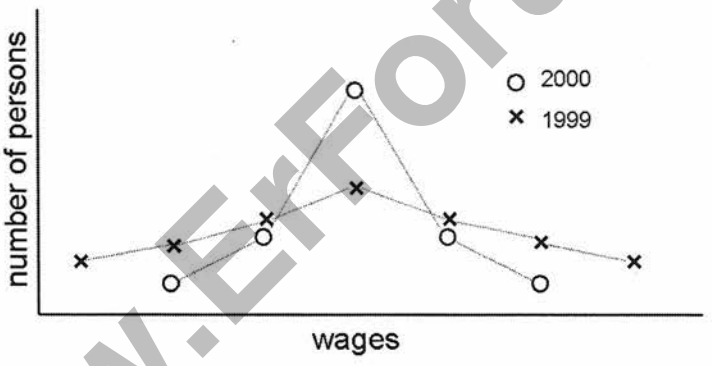
www.ErForum.Net

18. Circle PQR is inscribed in a quadrilateral ABCD. The circle touches side AD at point S. AP = 8 cm, QC = 3 cm and DC = 6 cm. The length of side AD is



1. 9 cm
2. 10 cm
3. 11 cm
4. 12 cm

19. The distribution of wages in a population is shown below for 2 years.

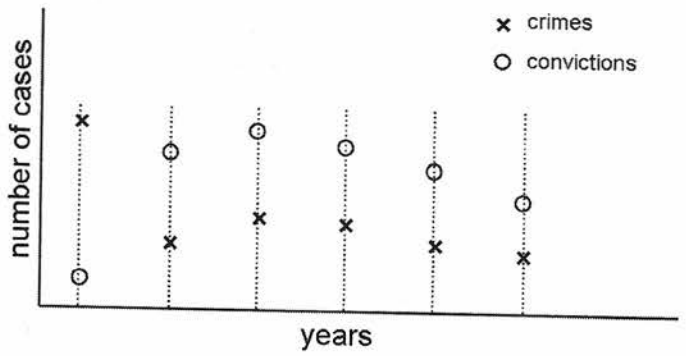


The average wage(s)

1. in 1999 is greater than that in 2000.
2. in 1999 is less than that in 2000.
3. in the two years are equal, but the variances are unequal.
4. in the two years are unequal, but the variances are equal.

www.ErForum.Net

20. The graph below shows crime rates and convictions for 5 years in a certain society.



Which of the following is correct?

1. The cause of convictions being on the rise is better law enforcement.
2. Falling crime rates have slowly reduced the conviction rates also.
3. There are fewer convictions because crime rate has fallen.
4. The graph must be wrong.

www.ErForum.Net