APTITUDE TEST FOR M.C.A.

Time: 2 Hours   Maximum Marks: 450

INSTRUCTIONS TO CANDIDATES

1. You are provided with a Test Booklet and an Optical Mark Reader (OMR) Answer Sheet to mark your responses. Do not soil the Answer Sheet. Read carefully all the instructions given on the Answer Sheet.

2. Write your Roll Number in the space provided on the top of **this page**.

3. Also write your Roll Number, Test Code, and Test Subject in the columns provided for the same on the **Answer Sheet**. Darken the appropriate bubbles with a **Ball Point Pen.**

4. The paper consists of 150 objective type questions. All questions carry equal marks.

5. Each question has four alternative responses marked **A, B, C** and **D** and you have to **darken** the bubble fully by a **Ball Point Pen** corresponding to the correct response as indicated in the example shown on the Answer Sheet.

6. Each correct answer carries **3** marks and each wrong answer carries **1** minus mark.

7. Space for rough work is provided at the end of this Test Booklet.

8. You should return the Answer Sheet to the Invigilator before you leave the examination hall. However, you can retain the Test Booklet.

9. Every precaution has been taken to avoid errors in the Test Booklet. In the event of any such unforeseen happenings, the same may be brought to the notice of the Observer/Chief Superintendent in writing. Suitable remedial measures will be taken at the time of evaluation, if necessary.

APTITUDE TEST FOR M.C.A.

1. The coefficient of x^2 in the expansion of e^{3x+4} is

   (A) $\dfrac{9e^2}{2}$ (B) $\dfrac{9e^4}{2}$

   (C) $\dfrac{3e^4}{2}$ (D) $\dfrac{3e^2}{2}$

2. The median of 10, 14, 11, 9, 18, 12, 6 is

   (A) 10   (B) 12
   (C) 14   (D) 11

3. $x^4 - 1 = 0$ has

   (A) only complex roots
   (B) two real roots and two complex roots
   (C) four real roots
   (D) one real roots and three complex roots

4. The range of the function $f(x) = \dfrac{x-2}{2-x}$ is

   (A) R (B) $R - \{1\}$
   (C) $\{-1\}$ (D) $R - \{-1\}$

5. The area of the triangle bounded by $x + y = 1$, $x = 0$ and $y = 0$ is

   (A) 1   (B) $\dfrac{1}{2}$

   (C) $\dfrac{1}{3}$ (D) $\dfrac{1}{\sqrt{2}}$

6. The roots of the quadratic equation $ax^2 + bx + c = 0$ will be reciprocal to each other if

(A) $a = \dfrac{1}{c}$ (B) $a = c$

(C) $b = ac$ (D) $a = b$

7. $\displaystyle\int_{-1}^{1}\left(2x^3 + 6x^7\right)dx$ is

(A) 8   (B) 2

(C) 6   (D) 0

8. The value of $\displaystyle\int x\, e^x\, dx$ is

(A) $(x+1)e^x + c$ (B) $(x-1)e^x + c$

(C) $xe^x + c$ (D) $e^x + x + c$

9. The conjugate of $\dfrac{1}{2+i}$ is

(A) $\dfrac{2}{5} - i\left(\dfrac{1}{5}\right)$ (B) $\dfrac{2}{5} + i\left(\dfrac{1}{5}\right)$

(C) $-\dfrac{2}{5} + i\left(\dfrac{-1}{5}\right)$ (D) 0

10. $\dfrac{1}{1 \cdot 2} + \dfrac{1}{3 \cdot 4} + \dfrac{1}{5 \cdot 6} + \dfrac{1}{7 \cdot 8} + \cdots$

(A) converges to log 2   (B) diverges

(C) converges to 1   (D) oscillates

11. The radius of the circle $x^2 + y^2 + 2gx + 2fy + c = 0$ is

   (A) $g^2 + f^2 - c$ (B) c

   (C) $\sqrt{g^2 + f^2 - c}$ (D) $-g - f$

12. The 16th term of the arithmetic sequence 4, 7, 10,   will be

   (A) 16   (B) 23
   (C) 35   (D) 49

13. If $|S \cup T| = 70$ and $|S| = 40$, then $|T|$ is

   (A) ≤ 30 (B) 30
   (C) > 30 (D) ≥ 30

14. If the number of elements in the intersection of three sets is 20, the number of elements in the intersection of any two sets is 60 and each set has 100 elements, then the number of elements in any one of the three sets is

   (A) 140   (B) 120
   (C) 180   (D) 260

15. If A is a square matrix, then AA' is a

   (A) Skew-symmetric matrix   (B) Symmetric matrix
   (C) Diagonal matrix   (D) None of the above

16. The rotation through $180°$ is identical to

   (A) reflection in x-axis   (B) reflection in y-axis
   (C) a point reflection   (D) identity transformation

17. The points $(5, 0, 2)$, $(2, -6, 0)$, $(4, -9, 6)$ and $(7, -3, 8)$ are vertices of a

   (A) square   (B) rhombus
   (C) rectangle   (D) parallelogram

18. If 2 is a root of $x^4 - x^3 + x^2 - x + k = 0$, then k is

   (A) – 10   (B) 10
   (C) 2   (D) 8

19. If $f(x) = |x-2|$ and $g(x) = f(f(x))$, then for $2 < x < 4$, $g'(x)$ is

   (A) –1   (B) 0
   (C) 1   (D) 2

20. If $f(x) = \dfrac{|x|}{x}$, $x \neq 0$, then $\lim\limits_{x \to 0} f(x)$

   (A) exists   (B) is equal to 1
   (C) is equal to – 1   (D) does not exist

21. Solution of $x(\log_{10} x)^2 - 3 \log_{10} x + 1 > 1000$ for $x \in R$ is

   (A) $(10, \infty)$ (B) $(100, \infty)$

   (C) $(1000, \infty)$ (D) $(1, \infty)$

Direction (Q. Nos. 22 and 23): a, b, c refer to the sides and A, B, C refer to the angles of a triangle and $s = \dfrac{a+b+c}{2}$

22. $(b+c)\cos A + (c+a)\cos B + (a+b)\cos C$ is

   (A) $a+b+c$ (B) $\cos A + \cos B + \cos C$
   (C) $\sin A + \sin B + \sin C$ (D) None of the above

23. If $c = 12$, $a = 6$ and $A = 30°$, then

   (A) $C = 100°$ $B = 50°$ (B) $B = 60°$ $C = 90°$
   (C) $C = 80°$ $B = 70°$ (D) None of the above

24. Solution of $|x-1|+|x-2|+|x-3| \geq 6$ is

(A) $[0,4]$ (B) $(-\infty, -2) \cup (2,3)$

(C) $(-\infty, 0] \cup [4,\infty)$ (D) None of the above

25. $1 + \log x + \dfrac{(\log x)^2}{2!} + \dfrac{(\log x)^3}{3!} + \ldots$ is

(A) $\log x$ (B) e^x

(C) x (D) None of the above

26. In an A.P., the sum of terms equidistant from the beginning and end is equal to

(A) first term   (B) second term
(C) sum of first and last term   (D) last term

27. Let L1 be a line passing through the origin and L2 be the line $x + y = 1$. If the intersects made by the circle $x^2 + y^2 - x + 3y = 0$ on L1 and L2 are equal, then L1 is

(A) $x + y = 0$ (B) $x - y = 0$
(C) $2x + 7y = 0$ (D) $x - 7y = 0$

28. The sequence $1, 1+\dfrac{1}{2}, 1+\dfrac{1}{3}, 1+\dfrac{1}{4},$ is

(A) bounded but not convergent
(B) convergent but not bounded
(C) convergent
(D) oscillates

29. In how many ways can 5 red and 4 white balls be drawn from a bag containing 10 red and 8 white balls?

    (A) $8C_5 \times 10C_4$ (B) $10C_5 \times 8C_4$
    (C) $18C_4$ (D) None of the above

30. Seven women and seven men are to sit around a circular table such that there is a man on either side of every woman. The number of seating arrangement is

    (A) $(7!)^2$ (B) $(6!)^2$
    (C) $6! \, 7!$ (D) $7!$

31. If $\vec{a}$ and $\vec{b}$ are two unit vectors inclined at an angle θ to each other, then $\left| \vec{a} + \vec{b} \right| < 1$ if

    (A) $\theta = \dfrac{\pi}{6}$ (B) $\theta = \dfrac{\pi}{2}$
    (C) $\theta = \dfrac{\pi}{3}$ (D) $\dfrac{2\pi}{3} < \theta < \pi$

32. $2x + y - 3z + 4 = 0$ is perpendicular to $x + y + kz - 5 = 0$ if

    (A) $k = -1$ (B) $k = 0$
    (C) $k = 2$ (D) $k = 1$

33. The points $(2, -1, 1)$, $(1, -3, -5)$, $(3, -4, -4)$ are vertices of a triangle which is

    (A) equilateral   (B) isosceles
    (C) right angled   (D) None of the above

34. Vectors $2\hat{i}-\hat{j}+\hat{k}$ and $2\hat{i}-4\hat{j}+\lambda\hat{k}$ are perpendicular if $\lambda =$

    (A) 16   (B) -4

    (C) -8 (D) 8

35. If G is the centroid of a triangle ABC, then $\overline{GA}+\overline{GB}+\overline{GC} =$

    (A) $\vec{0}$ (B) $3\overline{GA}$

    (C) $3\overline{GB}$ (D) $3\overline{GC}$

36. The eccentricity of $x^2-y^2=1$ is

    (A) $\sqrt{2}$ (B) $\pm\sqrt{2}$

    (C) <1 (D) None of the above

37 A straight line which makes an angle of 60° with each of y and z axes, inclines with x-axis at an angle

    (A) 45° (B) 30°

    (C) 75° (D) 60°

38. The equation of the tangent to the circle $x^2+y^2=169$ at (5, 12) is

    (A) $12x+5y=169$ (B) $5x+12y-169=0$

    (C) $x+y=169$ (D) $5x+12y=0$

39. The line $y=mx+1$ is a tangent to $y^2=4x$, if

    (A) $m=1$ (B) $m=2$

    (C) $m=4$ (D) $m=3$

40. Two finite sets have m and n elements. The number of elements in the power set of the first is 48 more than the number of elements in the power set of the second. Then the value of m and n are

    (A) 7, 6   (B) 6, 3

    (C) 6, 4   (D) 3, 7

8

41. Let $S = \{0,1,5,4,7\}$. Then the total number of subsets of S is

(A) 64

(B) 32

(C) 40

(D) 20

42. If $A = \{1,2,3\}$ and $B = \{4,5,6\}$, then $(A-B) \times (A \cap B)$ is equal to

(A) $\{(1,3),(1,5)\}$

(B) $\{(2,1),(2,2),(2,3)\}$

(C) $\{(1,2),(1,3),(1,5)\}$

(D) None of the above

43. The set of intelligent students in a class is

(A) a null set

(B) a singleton set

(C) a finite set

(D) not a well defined collection

44. The void relation in a set A is

(A) reflexive

(B) symmetric and transitive

(C) reflexive and transitive

(D) reflexive and symmetric

45. $(P \cap Q^c) \cup (P^c \cap Q^c)$ is equal to

(A) $P \cup Q$

(B) Q^c

(C) Q

(D) P

46. $(3x) - \dfrac{(3x)^2}{2} + \dfrac{(3x)^3}{3} - \ldots$ is convergent if

(A) $|x| < 3$

(B) $|x| \leq 3$

(C) $|x| < \dfrac{1}{3}$

(D) $|x| \leq \dfrac{1}{3}$

47   The function $f(x) = \cos x, x \in R$ is

     (A) an even function   (B) an odd function
     (C) a power function   (D) None of the above

48.   The probability of at least one head in a sequence of 10 independent tosses of a coin, with probability of tail turning up equal to $\dfrac{1}{3}$ (assume that the coin does not stand on its edge), is

     (A) $1 - \left(\dfrac{1}{3}\right)^{10}$ (B) $\left(\dfrac{1}{3}\right)^{10}$

     (C) $1 - \left(\dfrac{2}{3}\right)^{10}$ (D) $\left(\dfrac{2}{3}\right)^{10}$

49.   Given $E(X) = 6$, what is the value of $E(X + 4)$?

     (A) 6   (B) 4
     (C) 2   (D) 10

50.   The total number of combinations of n different things taken $1, 2, 3, \quad n$ at a time is

     (A) $2^n + 1$ (B) 2^{n+1}
     (C) $2^n - 1$ (D) 2^{n-1}

51.   What will be the reflection of (4, 5) in the second quadrant?

     (A) $(-4, -5)$ (B) $(-4, 5)$
     (C) $(4, -5)$ (D) None of the above

52.   A cone and a hemisphere have equal bases and equal volumes. The ratio of their height is

     (A) 1:2   (B) 2:1
     (C) 3:1   (D) None of the above

53. $\displaystyle\int_0^{\frac{\pi}{2}} \sin^2 x\, dx$ equals

(A) $\dfrac{\pi}{4}$

(B) $\dfrac{\pi}{8}$

(C) $\dfrac{1}{4}$

(D) $\dfrac{1}{2}$

54. The value of $\displaystyle\int_0^3\int_0^{\frac{\pi}{2}} r\cos\theta\, dr\, d\theta$ is

(A) $\dfrac{9}{2}$

(B) 9

(C) $\dfrac{3}{2}$

(D) $\dfrac{3\pi}{2}$

55. The solution of $(D^2 + 2D + 1)y = 0$ is

(A) $\left(A + Bx\right)e^{-x}$

(B) $\left(A + Bx\right)e^{x}$

(C) $\left(A + Bx\right)e^{2x}$

(D) $\left(A - Bx\right)e^{-x}$

56. A hall is 15 m long and 12 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is

(A) 720 m³

(B) 1200 m³

(C) 900 m³

(D) 1800 m³

57    $L\left(e^{-t}\cos 2t\right)$ is

(A) $\dfrac{s-1}{(s-1)^2+4}$

(B) $\dfrac{s+1}{(s+1)^2+4}$

(C) $\dfrac{s+1}{(s+1)^2-4}$

(D) $\dfrac{s-1}{(s-1)^2-4}$

58.   If $y=e^{5x}$ then, $D^n y$ is equal to

(A) e^{5nx}

(B) e^{nx}

(C) $5^n e^{5x}$

(D) e^{2x}

59.   If A is a 3×4 matrix and B is a $m\times n$ matrix, then AB is defined when

(A) $m=3$ $n=4$

(B) $m=3$ $n=3$

(C) $m=3$ and n is any value

(D) $m=4$ and n is any value

60.   The rank of the matrix $\begin{bmatrix} 2 & 4 & -6 \\ -1 & -2 & 3 \\ 5 & 1 & 1 \end{bmatrix}$ is

(A) 3

(B) 1

(C) 2

(D) 0

61.   The characteristic roots of $\begin{bmatrix} 1 & 0 & 0 \\ 2 & 3 & 0 \\ 4 & 5 & 6 \end{bmatrix}$ are

(A) 1,2,4

(B) 1,3,6

(C) 1,2,5

(D) 1,4,5

62. Let M be the set of all words appearing before the word "mathematics" in the dictionary and N is the set of words appearing before the word "new" Then which of the following statement is false?

(A) $M \subseteq N$ (B) $M \cap N = M$

(C) $new \in N$ (D) Mathematician $\in M$

63. $\int\limits_{|z|=5} \dfrac{dz}{z+7}$ is equal to

(A) 0   (B) $\dfrac{7}{2\pi i}$

(C) $\dfrac{1}{2\pi i}$ (D) 7

64. The residue of $\dfrac{2z+5}{(z-1)(z+1)}$ at $z = 1$ is

(A) 2   (B) 5

(C) $\dfrac{7}{2}$ (D) $\dfrac{5}{2}$

65. $f(z) = iz$ is analytic

(A) at all $z,\ z \neq 0$ (B) for all z

(C) no where   (D) at $z = 0$

66. $\lim\limits_{n \to \infty} \left(1 + \dfrac{1}{n}\right)^{n}$ is

(A) $e + \dfrac{1}{e}$ (B) e

(C) $\dfrac{1}{e}$ (D) $e - \dfrac{1}{e}$

67. $f(x)$ = integral part of x is

(A)   continuous when x is not an integer
(B)   continuous when x is an integer
(C)   continuous every where
(D)   discontinuous every where

68. $\operatorname{Re} z\bar{z} = 1$ is a

(A)   parabola   (B)   straight line
(C)   hyperbola   (D)   circle

69.   If $f(x) = \begin{cases} \sin\dfrac{1}{x}, & x \neq 0 \\ 0, & x = 0 \end{cases}$, then f is

(A)   discontinuous at 0   (B)   continuous at 0
(C)   unbounded   (D)   None of the above

70.   The area of the circle inscribed in a square of side 2 units is

(A) π (B) 2π

(C) $\dfrac{\pi}{2}$ (D) $\dfrac{\pi}{4}$

71.   The inverse of $A = \begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix}$ is

(A) $\begin{bmatrix} 2 & -3 \\ -1 & 2 \end{bmatrix}$ (B) $\begin{bmatrix} 2 & 3 \\ -1 & 2 \end{bmatrix}$

(C) $\begin{bmatrix} 2 & -3 \\ 1 & 2 \end{bmatrix}$ (D) $\begin{bmatrix} 2 & -3 \\ -1 & -2 \end{bmatrix}$

72. The pdf of the standard normal distribution is

   (A) an odd function   (B) an even function
   (C) neither even nor odd   (D) None of the above

73. If A and B are any two sets, $A \cup (A \cap B)$ is equal to

   (A) A (B) B
   (C) A^c (D) B^c

74. If C is an obtuse angle in a triangle, then

   (A) $\tan A \tan B < 1$ (B) $\tan A \tan B > 1$
   (C) $\tan A \tan B = 1$ (D) None of the above

75. The function $f(x) = \sin x + 2\cos x$ is

   (A) unbounded   (B) bounded
   (C) discontinuous at $x = 0$ (D) None of the above

Direction (Q. Nos. 76 – 79): In each of the following questions, a figure series is given out of which the last is missing. Identify the figure which would complete the series.

76.

   (A) 1   (B) 2
   (C) 3   (D) 4

77.

(A) 1   (B) 2
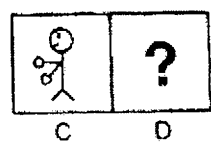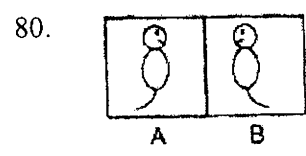(C) 3   (D) 4

78.

(A) 1   (B) 2
(C) 3   (D) 4

79.
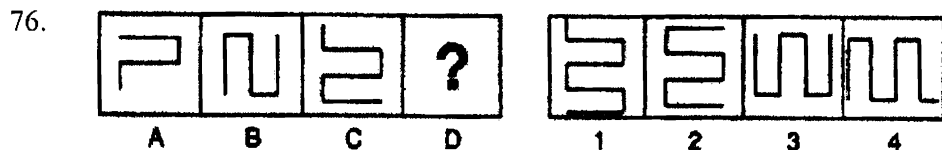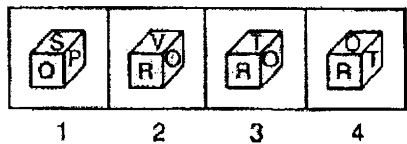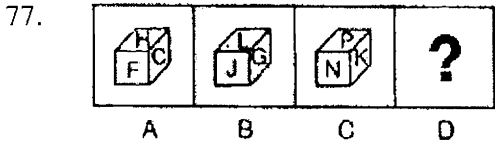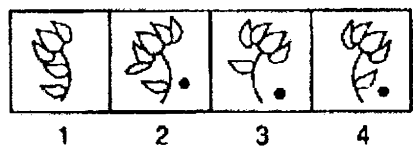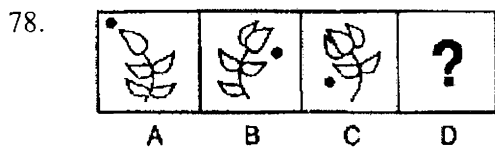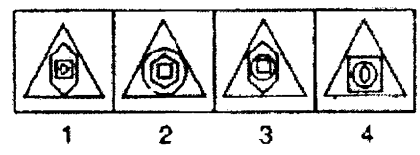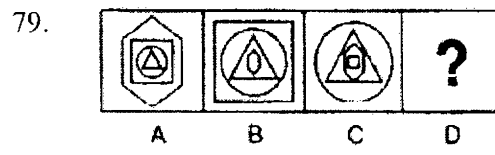
(A) 1   (B) 2
(C) 3   (D) 4

Direction (Q. Nos. 80 – 85): In each of the following questions, there is some relationship between the figures A and B. The same relationship exists between the figure C and one of the four alternatives 1, 2, 3 and 4. Choose the correct alternative.
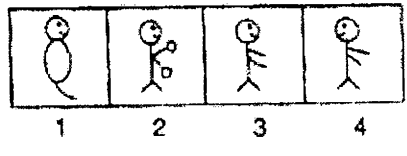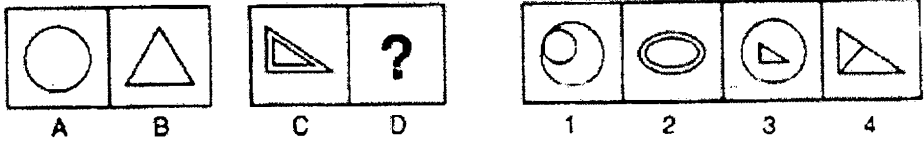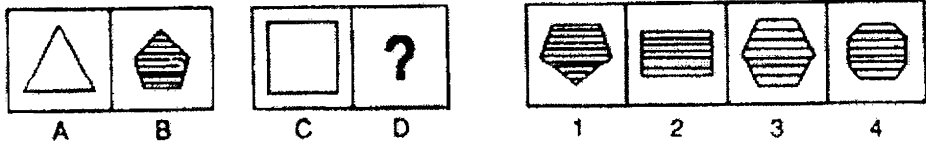
80.

(A) 1   (B) 2
(C) 3   (D) 4
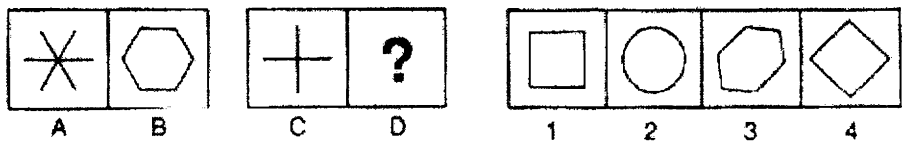
81.

(A) 1   (B) 2
(C) 3   (D) 4

82.

(A) 1   (B) 2
(C) 3   (D) 4

83.

(A) 1   (B) 2
(C) 3   (D) 4

84.

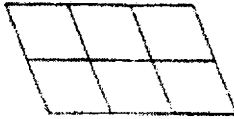(A) 1   (B) 2
(C) 3   (D) 4

85.
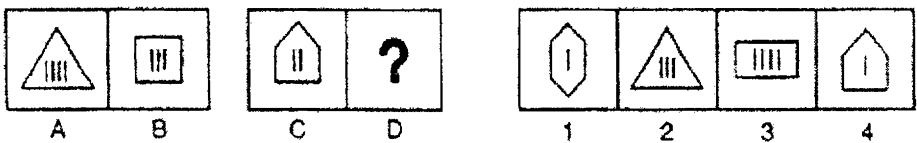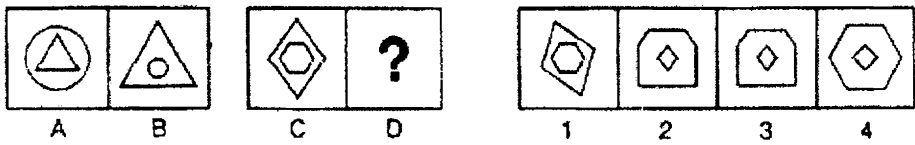
(A) 1   (B) 2
(C) 3   (D) 4
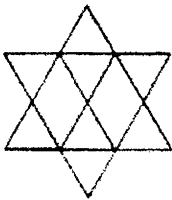
86. How many parallelograms are there in the figure below?

(A) 14   (B) 15
(C) 16   (D) 18

87. Determine the number of pentagons in the following figure

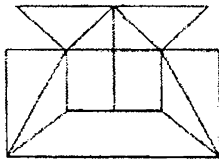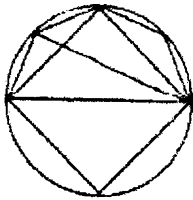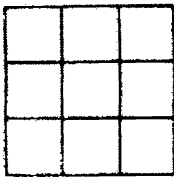(A) 5   (B) 6
(C) 8   (D) 10

88. State the minimum number of straight lines required to make the figure given below

(A) 16   (B) 17
(C) 18   (D) 19

89. Count the number of triangles in the following figure

(A) 8   (B) 10
(C) 11   (D) 12

90. The number of squares in the following figure is

(A) 14   (B) 13
(C) 10   (D) 9

91. If $\vec{r} = x\hat{i} + y\hat{j} + z\hat{k}$, then $\nabla.\vec{r}$ is equal to

(A) $\bar{0}$

(B) 0

(C) 3

(D) None of the above

92. The radius of convergence of $1 + \dfrac{z}{3} + \left(\dfrac{z}{3}\right)^2 \dfrac{1}{2!} + \left(\dfrac{z}{3}\right)^2 \dfrac{1}{3!} + ...$ is

(A) 0

(B) ∞

(C) $\dfrac{1}{3}$

(D) 3

Direction (Q. Nos. 93 – 95): In each of the following questions find out the alternative which will replace the question mark.

93. Race   Fatigue   Fast : ?

(A) Food

(B) Laziness

(C) Hunger

(D) Race

94. Parts   Strap   Wolf : ?

(A) Fox

(B) Animal

(C) Wood

(D) Flow

95. MO : 13 11 :: HJ   ?

(A) 19 17

(B) 18 16

(C) 8 10

(D) 16 18

96. Cyclone is related to Anticyclone in the same way as Flood is related to

(A) Devastation

(B) Havoc

(C) River

(D) Drought

97 Condolence is related to Loss in the same way as Congratulation is related to

(A) Praise   (B) Achievement
(C) Accusation   (D) Reward

Direction (Q. Nos. 98 – 100): Choose the odd one out.

98.

(A) Book   (B) Paper
(C) Pencil   (D) Pen

99.

(A) Arc   (B) Tangent
(C) Diagonal   (D) Radius

100.

(A) Indigo   (B) Orange
(C) Pink   (D) Green

Direction: Choose the odd number pair.

101.

(A) 13-31   (B) 45-54
(C) 16-61   (D) 71-88

Direction (Q. Nos. 102 – 104): A, B, C, D and E are five different integers. When written in the ascending order of values, the difference between any two adjacent integers is 8. D is the greatest and A is the least. B is greater than E but less than C. The sum of the integers is equal to E.

102. The greatest number has the value

(A) 6   (B) –10
(C) 22   (D) 14

103. The sum of A and B is

    (A) −20   (B) −18
    (C) 6   (D) 14

104. The product of the integers is

    (A) −30,240   (B) 32,080
    (C) −30,000   (D) 24,800

Direction (Q. Nos. 105 – 109): Complete the series

105. 4, 6, 12, 14, 28, 30, ?

    (A) 60   (B) 32
    (C) 62   (D) 64

106. $\dfrac{1}{2}, \dfrac{3}{4}, \dfrac{5}{8}, \dfrac{7}{16}, ?$

    (A) $\dfrac{10}{17}$ (B) $\dfrac{11}{34}$
    (C) $\dfrac{12}{35}$ (D) $\dfrac{9}{32}$

107. Z, X, V, T, R, ? , ?

    (A) O, K   (B) N, M
    (C) K, S   (D) P, N

108. BDF, CFI, DHL, ?

    (A) CJM   (B) EIM
    (C) EJO   (D) EMI

109. 3 F, 6 G, 11 I, 18 L, ?

      (A) 21 O   (B) 25 N
      (C) 27 P   (D) 27 Q

110. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through

      (A) 145°   (B) 150°
      (C) 155°   (D) 160°

111. Sakshi invests a part of Rs.12,000 in 12% stock at Rs.120 and the remainder in 15% stock at Rs.125. If his total dividend per annum is Rs.1360, how much does he invest in 12% stock at Rs.120?

      (A) Rs.4000   (B) Rs.4500
      (C) Rs.5500   (D) Rs.6000

112. The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is

      (A) 40%   (B) 42%
      (C) 44%   (D) 46%

113. The angle of elevation of the Sun, when the length of the shadow of a tree is 3 times the height of the tree, is

      (A) 30°   (B) 45°
      (C) 60°   (D) 90°

114. In what ratio must a grocer mix two varieties of pulses costing Rs.15 and Rs.20 per kg respectively so as to get a mixture worth Rs.16.50 per kg?

      (A) 3 7   (B) 5 7
      (C) 7 3   (D) 7 : 5

115. $\lim\limits_{x \to 0} \dfrac{\left(e^{x} - e^{-x}\right)}{\log\left(1 + x\right)}$ is equal to

    (A) 0   (B) 2

    (C) 1   (D) 3

116. $f(x) = e^{x} + e^{-x}$ is continuous

    (A) for all x with $|x| < 1$

    (B) for all x with $|x| \leq 1$

    (C) for all non-negative value of x

    (D) for all value of x

117. $\lim\limits_{x \to 1} \dfrac{\log x}{x}$ is equal to

    (A) 0   (B) 1

    (C) −1   (D) None of the above

118. If TAP is coded as SZO, then how is FREEZE coded?

    (A) EQDFYG   (B) ESDFYF

    (C) GQFDYF   (D) EQDDYD

119. If SWITCH is written as TVJSDG, which word would be written as CQFZE ?

    (A) BREAD   (B) BARED

    (C) BRADE   (D) BRAED

120. If D = 4 and COVER = 63, then BASIC = ?

    (A) 49   (B) 50

    (C) 54   (D) 55

121. If 35796 is written as 44887, how is 46823 written in that code?

    (A) 57914   (B) 55914
    (C) 55934   (D) 55714

122. If EHFNRQ is the code for BECKON, which word has the code QDFWXULQ?

    (A) NACTURIN   (B) NCAUTIRN
    (C) NACUTIRN   (D) NATCRIUN

123. Pointing to a gentle man, Deepak said, "His only brother is the father of my daughter's father" How is the gentle man related to Deepak?

    (A) Grand father   (B) Father
    (C) Brother-in-law   (D) Uncle

124. A party consists of grandmother, father, mother, four sons and their wives and one son and two daughters to each of the sons. How many females are there in all?

    (A) 14   (B) 16
    (C) 18   (D) 24

Directions (Q. Nos. 125 – 129): Study the following information carefully and answer the questions given below it.

    (i)   P, Q, R, S, T and U are six students procuring their Master's degree in six different subjects – English, History, Philosophy, Physics, Statistics and Mathematics.

    (ii)   Two of them stay in hostel, two stay as paying guest (PG) and the remaining two stay at their home

    (iii) R does not stay as PG and studies Philosophy

    (iv) The students studying Statistics and History do not stay as PG.

    (v)   T studies Mathematics and S studies Physics.

    (vi) U and S stay in hostel. T stays as PG and Q stays at home.

125. Who studies English?

(A) R   (B) S
(C) T   (D) P

126. Which of the following combinations of subject and place of stay is not correct?

(A) English-Hostel   (B) Mathematics-PG
(C) Philosophy-Home   (D) Physics-Hostel

127 Which of the following pairs of students stay one each at hostel and at home?

(A) QR   (B) SR
(C) US   (D) None of the above

128. Which subject does Q study?

(A) History   (B) Statistics
(C) History or Statistics   (D) None of the above

129. Which of the following pairs of students stay at home?

(A) PQ   (B) QR
(C) RS   (D) ST

130. If 6th March, 2005 is Monday, what was the day of the week on 6th March, 2004?

(A) Sunday   (B) Saturday
(C) Tuesday   (D) Wednesday

131. Which one of the following is always found in "Bravery"?

(A) Experience   (B) Power
(C) Courage   (D) Knowledge

Direction (Q. Nos. 132 – 136): Answer the questions using the following information.

(i)   A team of five is to be selected from amongst five boys A, B, C, D and E and four girls P, Q, R and S

(ii) A and S have to be together

(iii) P cannot be put with R

(iv) D and Q cannot go together

(v)   C and E have to be together

(vi) R cannot be put with B.

132. If two of the members have to be boys, the team will consist of

    (A) ABSPQ   (B) ADSQR

    (C) BDSRQ   (D) CESPQ

133. If R be one of the members, the other members are

    (A) PSAD   (B) QSAD

    (C) QSCE   (D) SACE

134. If two of the members are girls and D is one of the members, the members of the team other than D are

    (A) PQBC   (B) PQCE

    (C) PSAB   (D) PSCE

135. If A and C are members, the other members of the team cannot be

    (A) BES   (B) DES

    (C) ESP   (D) PQE
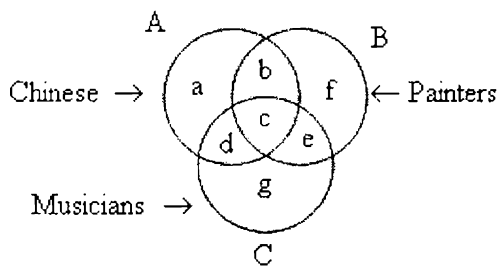
136. If including P at least three members are girls, the members of the team other than P are

    (A) QSAB   (B) QSBD

    (C) QSCE   (D) RSAD

Direction (Q. Nos. 137 – 141): In the given figure, there are three intersecting circles each representing certain sections of people. Choose the letter of the region.

137. Chinese who are painters but not musicians

    (A) b   (B) c
    (C) d   (D) g

138. Painters who are neither Chinese nor musicians

    (A) b   (B) c
    (C) f   (D) g

139. Chinese who are musicians but not painters

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

140. Chinese who are painters as well as musicians

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

141. Chinese who are neither painters nor musicians

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

Direction (Q. Nos. 142 – 146): Choose the conclusion which logically follows from the given statements.

142. Statement:

Every library has books.

Conclusions:

    (A)   Books are only in library
    (B)   Libraries are meant for books only
    (C)   No library is without books
    (D)   Some libraries do not have readers

143. Statements:

1. Shyam is not the father of Hari

2. Hari is the son of Suresh.

3. Suresh has three sons

Conclusion:

    (A)   Shyam is the son of Suresh
    (B)   Hari is the brother of Shyam
    (C)   Suresh is the father Hari
    (D)   Shyam has no children

144. Statements:

1. Only students can participate in the race.

2. Some participants in the race are females

3. All female participants in the race are invited for coaching.

Conclusions:

    (A)   All participants in the race are invited for coaching
    (B)   All participants in the race are males
    (C)   All students are invited for coaching
    (D)   All participants in the race are students

145. Statements:

1. I watch TV only if I am bored.

2. I am never bored when I have my brother's company.

3. Whenever I go to the theatre, I take my brother along.

Conclusions:

(A) If I am bored, I seek my brother's company
(B) If I am not bored, I do not watch TV
(C) If I am bored, I watch TV
(D) If I am not with my brother then I watch TV

146. Statement:

Hari told Mohan a ghost lived by the peepal tree on the outskirts of the village.
Conclusions:

(A) Peepal trees grow on the outskirts of the village
(B) Ghosts live on peepal trees
(C) Mohan must be afraid of ghosts
(D) Hari perhaps believed in the stories of ghosts

Direction (Q. Nos. 147 and 148): Find the word which cannot be made from the letters of the given word.

147. CARPENTER

(A) NECTAR   (B) CARPET
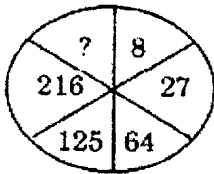(C) PAINTER   (D) REPENT

148. KNOWLEDGE

(A) WEDGE   (B) GODOWN
(C) KLEEN   (D) GOLDEN

Direction (Q. Nos. 149 and 150): Find the missing character from among the alternatives.

149.

(A)   4

(B)   305

(C)   343

(D)   729

150.

?	1	2
21	22	40
1	2	5
20	23	43

(A)   2

(B)   3

(C)   4

(D)   5

***