

## MATHEMATICS

76. If  $\tan \theta < 0$ ,  $\sin \theta < 0$ , then the terminal arm of the angle lies in the quadrant

(a) I

(b) II

(c) III

(d) IV

77. Point of intersection of the angle bisectors of a triangle is called

(a) circum-centre

(b) orthocentre

(c) in-centre

(d) centroid

78. The point of concurrency of the medians of a triangle is called

(a) circum-centre

(b) orthocentre

(c) in-centre

(d) centroid

**Stream 2: Eng, Phys, Chem, Math**

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79.  ${}^4C_4$  has the value equal to  
 (a) 4 (b) 1 (c) 0 (d) none of these
80. A circle passing through the vertices of a triangle is called  
 (a) circum-circle (b) in-circle (c) escribed circle (d) none of these
81. The greatest angle is opposite to  
 (a) smallest side (b) greatest side (c) same side (d) right side
82. The sum of odd coefficients in the expansion of  $(1+x)^8$  is (a) 5  
 (a) 9 (b) 16 (c) 25 (d) 32
83. The converse of contra positive of  $p > q$  is :  
 (a)  $q \rightarrow p$  (b)  $\neg q \rightarrow \neg p$  (c)  $\neg p \rightarrow \neg q$  (d)  $p \rightarrow q$
84.  $p: 4 < 7, q: 6 > 11$ , the disjunction  $p \vee q$  is  
 (a) false (b) true (c) not valid (d) unknown
85.  $p: 3 < 5, q: 1 < 0$ , then  $p \wedge q$  is  
 (a) true (b) false (c) true as well as false (d) unknown
86. The probability to get an odd number in a dice thrown once is  
 (a) 1/2 (b) 1/3 (c) 1/5 (d) 1/6
87. If  $n$  is odd, then the expansion of  $(a+x)^n$  has  
 (a) 2 middle terms (b) 3 middle terms (c) 4\*middle terms (d) none of the above
88. A die is rolled, what is the probability of getting a number which is even and greater than 2?  
 (a) 1/2 (b) 1/3 (c) all of these (d) none of these
89. The trivial solution of the homogeneous linear equations is  
 (a) (0,0,0) (b) (1,0,0) (c) (0,1,0) (d) (0,0,1)
90. The geometric means between 4 and 16 are  
 (a)  $\pm 4$  (b)  $\pm 6$  (c)  $\pm 8$  (d) 16
91. The order of matrix  $\begin{bmatrix} 1 & 2 & 8 & 3 \end{bmatrix}$  is  
 (a)  $4 \times 1$  (b)  $1 \times 4$  (c)  $4 \times 4$  (d)  $3 \times 4$
92. A subset of  $A \times B$  is called a  
 (a) relation from A to B (b) relation from Bio A (c) relation in A (d) relation in B
93. If A is non-singular square matrix, then  $AA^{-1}$  equals :  
 (a) A (b)  $A^{-1}$  (c) 0 (d) 1
94. The proposition  $p \rightarrow q \wedge q \rightarrow p$  is written as  
 (a)  $p \wedge q$  (b)  $p \rightarrow q$  (c)  $q \rightarrow p$  (d)  $p \leftrightarrow q$
95. The sample space for tossing a coin once is  
 (a) {H} (b) {T} (c) {H,T} (d) {H,T}
96. A matrix having  $m$  rows and  $n$  columns with  $m \neq n$  is said to be a  
 (a) Rectangular matrix (b) Square matrix (c) Scalar matrix (d) Identity matrix
97. If the rows and columns of a matrix are interchanged the resulting matrix is  
 (a) Adjoint of matrix (b) Co factor matrix (c) Transpose of matrix (d) none of these
98. The A.M. between  $x-3$  and  $x+5$  is  
 (a)  $x+1$  (b)  $x-1$  (c)  $x-3$  (d)  $x-5$
99. If  $n$  is any positive integer, then  $1+3+5+\dots+(2n-1) =$   
 (a)  $n$  (b)  $n+1$  (c)  $2n$  (d)  $n^2$
100. 5 keys can be arranged in a circular ring in number of ways  
 (a) 24 (b) 12 (c) 6 (d) 5