

**TOPIC : FULL MATHEMATICS, LOGICAL REASONING & STATISTICS**

1. Mr. Raval purchased a machine on 1/4/2005 and agreed to pay 10 instalment each of Rs. 24000 at the end of every financial year inclusive of interest. If the compound rate of interest is 15% then the value of machine at present is  $[(1.15)^{10} = 4.046]$
- (a) 60227      (b) 120455      (c) 220455      (d) None
2.  $\int x^3 \cdot e^x dx =$  \_\_\_\_\_.
- (a)  $(x^3 + 3x^2 + 6x + 6)e^x + c$       (b)  $(x^3 - 3x^2 - 6x + 6)e^x + c$   
(c)  $(x^3 - 3x^2 + 6x - 6)e^x + c$       (d)  $(x^3 - 3x^2 - 6x - 6)e^x + c$
3. What is the coefficient of concurrent deviations for the following data :
- | Year : | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--------|------|------|------|------|------|------|------|------|
| Price  | 135, | 138  | 140  | 133  | 145  | 148  | 149  | 152  |
| Demand | 236  | 235  | 231  | 236  | 230  | 229  | 227  | 224  |
- (a) -1      (b) 0.43      (c) 0.5      (d)  $\sqrt{2}$
4. There are 15 two rupee coins, 25 five rupee coins and 10 ten rupee coins in a bowl. If a coin is selected at random from the bowl, then the probability of not selecting a ten rupee coin is
- (a) 0.20      (b) 0.80      (c) 0.75      (d) None
5. Find the missing term : 4,7, 12, 19, 28 ?
- (a) 30      (b) 36      (c) 39      (d) 49
6. Arjun buys a house for which he agrees to pay Rs. 5000 at the end of each month for 8 years. If money is worth 12% converted monthly, what is the capital value of the house ?
- (a) Rs. 307638.50      (b) Rs. 310825.60      (c) Rs. 25902.75      (d) none of these
7. Ten years ago the age of Sanjay was four times of his son. Ten years hence his age will be twice of his son. The present ages of Sanjay and his son are.
- (a) (58, 20)      (b) (60, 20)      (c) (50, 20)      (d) None of these
8. The formula used in a Pie – diagram to find the angle is
- (a) (Value of the component / total of all components)  $\times 360^\circ$   
(b) (value of the component + total of all components)  $\times 360^\circ$   
(c) Either (a) or (b)  
(d) None of these
9. In an intelligence test administered to 1,000 students, the average score was 42 and the standard deviation is 24. Find the number of students exceeding a score of 50.
- (a) 370      (b) 350      (c) 360      (d) 320
10. There are five Girls P, Q, R, S, T, sitting in a park in a circular way. Q and T are right opposite to P and S respectively and R is equidistant between S and Q. P is facing South – West while S is facing South – East. Which direction is R facing ?
- (a) East      (b) West      (c) South      (d) North

- 11.** You are given 6 balls of different colours (black, white, red, green violet, yellow) ; In how many ways can the 6 balls be arranged in a row, so that black and white balls may never come together.  
 (a) 480 (b) 580 (c) 680 (d) None of these
- 12.** On the average experienced person does 7 units of work while a fresh on e5 units of work daily but the employer has to maintain an output of at least 50 units of work per day. This situation can be expressed as  
 (a)  $7x + 5y \leq 50$  (b)  $7x + 5y > 50$   
 (c)  $7x + 5y \geq 50$  (d) none of these
- 13.** A man travels from village A to village B at a speed of 8 km/ hr. On his way back, he travels at a speed of 4 km/ hr. Find his average speed.  
 (a) 6 (b) 5.33 (c) 6.67 (d) 8.67
- 14.** In a partially destroyed laboratory record of an analysis of correlation data, only the following results are legible : Variance of  $X = 9$ ,  
 Regression equations :  $4X - 5Y + 33 = 0$  and  $20X - 9Y = 107$   
 On the basis of the above information, the value of  $\sigma_y$  is :  
 (a) 5 (b) 7 (c) 4 (d) None

Each of the following, questions contains two statements followed by two conclusions numbered I and II. You have to consider the two statements to be true, even if they seem to be at variance at the commonly known facts. You have to decide which of the given conclusions definitely follows from the given statements.

Answer (a) if only I follows ; (b) if only conclusion II follows; (c) if either I or II follows ; (d) if neither I nor II follows:

- 15.** Statement : Some cups are laptop.

All keys are laptop

Conclusions : I. Some cups are keys.

II. Some keys are cups.

- 16.** Statements : All pens are roads.

All roads are houses

Conclusions : I. All houses are pens.

II. Some houses are pens

- 17.** Statements : Some pastries are toffees.

All toffees are chocolates.

Conclusions : I. Some Chocolates are toffees.

II. Some toffees are not pastries.

- 18.** If the inflexion points of a Normal Distribution are 6 and 14. Find its Standard Deviation ?

(a) 4 (b) 6 (c) 10 (d) 12

19. Following are the wages of 8 workers expressed in Rs. : 82, 96, 52, 75, 65, 70, 70, 50. Find the range and also its coefficient.  
 (a) Rs. 42, 31.51% (b) Rs. 46, 31.51% (c) Rs. 46, 31.15% (d) Rs.46, 30.15%
20. Find the amount of an annuity of Rs. 2000 payable at the beginning of each month for 3 years at the rate of 15% compounded monthly.  
 (a) Rs. 85873.86 (b) Rs. 91358.90 (c) Rs. 96399.26 (d) none of these
21. If in an A.P. whose first term is 2, the sum of first six terms is equal to one third of the sum of next six terms, the common difference of the A.P. is  
 (a) 4 (b) -4 (c)  $\pm 4$  (d) None of these
22. If  $A = \begin{bmatrix} 1 & 0 \\ 1/2 & 1 \end{bmatrix}$  then  $A^{50}$  is  
 (a)  $\begin{bmatrix} 1 & 0 \\ 0 & 50 \end{bmatrix}$  (b)  $\begin{bmatrix} 1 & 0 \\ 50 & 1 \end{bmatrix}$  (c)  $\begin{bmatrix} 1 & 25 \\ 0 & 1 \end{bmatrix}$  (d)  $\begin{bmatrix} 1 & 0 \\ 25 & 1 \end{bmatrix}$
23. Suppose, a business executive was earning Rs. 2050 in the base period, what should be his salary in the current period if his standard of living is to remain in the same ?  
 Given that :  $\Sigma W = 25$ ,  $\Sigma IW = 3544$   
 (a) Rs. 2906 (b) Rs. 2606 (c) Rs. 2806 (d) Rs. 2706
24. There are 6 pairs of observed values having rank correlation coefficient 0.4. In rechecking it was found that the difference in rank for one observed pair was taken 3 instead of 4. The rectified rank correlation coefficient is \_\_\_\_\_.  
 (a) 0.3 (b) 0.2 (c) 0.25 (d) 0.28
25. Five persons are standing in a line. One of the two persons at the extreme ends is a professor and the other a businessman. An advocate is standing to the right of a student. An author is to be left of the businessman. The student is standing between the professor and the advocate. Counting from the left, the advocate is at which place ?  
 (a) 1<sup>st</sup> (b) 2<sup>nd</sup> (c) 3<sup>rd</sup> (d) 5<sup>th</sup>
26. If  $x^{2/3} + y^{2/3} = a^{2/3}$  then  $\frac{dy}{dx} =$   
 (a)  $\sqrt{\frac{x}{y}}$  (b)  $\sqrt[3]{\frac{x}{y}}$  (c)  $\sqrt[4]{\frac{y}{x}}$  (d)  $\sqrt[3]{\frac{y}{x}}$
27. What is the present value of Re. 1 to be received after 5 years, compounded annually at 8% ?  
 (a) Re. 0.70 (b) Re. 0.86 (c) Re. 0.68 (d) None
28. A bucket can contain 6 green cars and 4 blue cars. If mummy took 2 cars for her children and pays Rs. 10 and Rs. 20 for a green and blue cars respectively, then her expected amount to pay is .....  
 (a) Rs. 28 (b) Rs. 35 (c) Rs. 46 (d) None
29. If the variables are increased or decreased by the same amount, the quartile deviation is  
 (a) decreased (b) Increased (c) unchanged (d) None
30. Muuna starts from a point, walks 4 km. towards north and turns left and walk 6 km, turns right and walks for 3 km. and again turns right and walks 4 km. and takes rest for 1 hour. He gets up and walks straight 2 km. in the same direction and turns right and walks 1 km. the direction in which he is facing is .....  
 (a) West (b) North (c) South (d) South - East

31. Find the value of  $k$  for which each of the following system of equations have infinitely many solution  $2x + 3y - 5 = 0$ ,  $6x + ky - 15 = 1$
- (a)  $k \neq -5$  (b)  $k = 9$  (c)  $k$  is any real number (d) None of these
32. If  $X = \{a, b, c, d, e, f\}$ ,  $Y = \{a, e, i, o, u\}$  and  $Z = \{m, n, o, p, q, r, s, t, u\}$  then  $X \cup (Y - Z)$  is
- (a)  $\{a, b, c, d, e, f, i\}$  (b)  $\{a, b, c, d, c, f, o\}$   
(c)  $\{a, b, c, d, c, f, u\}$  (d) None
33. The quartiles of a variable are 45, 52 and 65 respectively. Its quartile deviation is
- (a) 10 (b) 20 (c) 25 (d) 8.30
34. The two lines of regression are  $3x - 5y + 6 = 0$  and  $5x - 3y + 1 = 0$ . What is the correlation coefficient between  $x$  and  $y$  ?
- (a)  $-3/5$  (b)  $3/5$  (c)  $4/25$  (d) None of these
35. Amit said "This girls is the wife of the grandson of my mother." How is Amit related to the girl ?
- (a) Brother (b) Grandfather (c) Husband (d) Father – in – law
36. Ram purchased a house for which he agreed to pay Rs. 5000 at the beginning of each 3 months until he has made 10 payments. If money is worth 6% compounded quarterly, what is the equivalent cash price of the house ?
- (a) Rs. 46802.58 (b) Rs. 47108.60 (c) Rs. 46399.26 (d) none of these
37. Solving  $x^3 + 9x^2 - x - 9 = 0$ ; we get the following roots
- (a)  $\pm 1 ; -9$ ; (b)  $\pm 1 ; \pm 9$ ; (c)  $\pm 1 ; 9$  (d) None
38. If the standard deviation of 1<sup>st</sup>  $n$  natural numbers is 2, then the value of  $n$  is
- (a) 4 (b) 6 (c) 7 (d) 9
39. If linear trend line equ. By least square method taking 2012 as base year is  $Y_1 = 1550 + 25.75X$ . The value of trend value of year 2018 is \_\_\_\_\_.
- (a) Rs. 1704.50 (b) Rs. 1825.50 (c) Rs. 2104.25 (d) None
40. If  $y = \sqrt[3]{\log x + \sqrt[3]{\log x + \sqrt[3]{\log x + \dots}} \propto$  then  $\frac{dy}{dx} =$
- (a)  $\frac{1}{(3y^2-1)}$  (b)  $\frac{1}{3y^2-1}$  (c)  $\frac{1}{x(3y^2-1)}$  (d)  $\frac{1}{x(3y^2+1)}$
41. In an examination the question paper contains three different sections A, B & C containing 4, 5, & 6 question respectively ? In how many ways, a candidate can make a selection of 7 question selecting at least two questions from each sections ?
- (a) 2700 (b) 2600 (c) 4000 (d) none of these
42.  $\int_{-1}^1 \log\left(\frac{2-x}{2+x}\right) dx =$
- (a) 1 (b) -1 (c)  $\pm 1$  (d) 0
43. The data given as 1, 3, 5, 7, 9, 11 will be called as
- (a) a continuous series (b) a discrete series  
(c) an individual series (d) time series
44. The weighted arithmetic mean of the four numbers 26, 28, 12 and 4 is 10.7. If the weights of the first three numbers are 1, 3 and 4, respectively, then find the weight of the fourth number.
- (a) 5 (b) 6 (c) 7 (d) None

45. Five friends P, Q, R, S and T are sitting in a row facing North. Here, S is between T and Q and Q is to the immediate left of R. P is to the immediate left of T. Who is in the middle ?  
 (a) S (b) T (c) Q (d) R
46. If  $y = \frac{e^x+1}{e^x-1}$  then  $\frac{dy}{dx}$  is equal to  
 (a)  $\frac{-2e^x}{(e^x-1)^2}$  (b)  $\frac{2e^x}{(e^x-1)^2}$   
 (c)  $\frac{-2}{(e^x-1)^2}$  (d) None of these
47. Mr. X borrows Rs. 3000 at 10% compound rate of interest. At the end of each year he pays back Rs. 1000. How much he should pay at the end of the 3<sup>rd</sup> year to clear his entire dues ?  
 (a) Rs. 1583 (b) Rs. 1683 (c) Rs. 1153 (d) None
48. There are 100 balls numbered from 1 to 100 in a box. If one of them is selected at random, what is the probability that the number printed on the ball would be divisible by 4 & 5 both ?  
 (a) 0.25 (b) 0.42 (c) 0.35 (d) 0.05
49. For a moderately non – symmetrical distribution, mean deviation = 4/5 of standard deviation.  
 (a) True (b) False (c) Both (d) None
50. If in a certain language, POPULAR is coded as QPQVMBS, which word would be coded as GBNPVT ?  
 (a) FARMER (b) FAMOUS (c) FRAMES (d) FARMES
51. Out of total 1500 students, 450 passed in Accounts, 500 in Maths, 300 in Costing, 300 in both Accounts and Maths. 320 in both Maths and costing, 350 in both Accounts and Costing, 250 students passed in all the three subjects. Find the number who passed at least in anyone of the subjects.  
 (a) 630 (b) 530 (c) 730 (d) None
52. How many numbers of six digits can be formed from the digits 1, 2, 3, 4, 5, 6 (no digit being repeated) ? How many of these are not divisible by 5 ?  
 (a) (720, 600) (b) (600, 720) (c) (500, 720) (d) None of the above
53. For the data given calculate Fisher's index  
 $\Sigma P_1 Q_0 = 3365$ ,  $\Sigma P_0 Q_0 = 3530$ ,  $\Sigma P_1 Q_1 = 3400$ ,  $\Sigma P_0 Q_1 = 3600$   
 (a) 99 (b) 90 (c) 90.25 (d) 94.88
54. The number of students who opted chartered accountancy as profession for 13 years in a location is given below :
- | Year                        | 1  | 2  | 3  | 4  | 5  | 6  | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|-----------------------------|----|----|----|----|----|----|---|---|---|----|----|----|----|
| Frequency (no. Of students) | 53 | 42 | 33 | 27 | 18 | 12 | 6 | 7 | 2 | 6  | 3  | 1  | 1  |
- What is the number of students who opted for less than 3 years for the course ?  
 (a) 83 (b) 95 (c) 128 (d) 116
55. Markandey is Rajiv's mother's father. Markandey has three brothers. One of them has grandson Abhi. Rajan is son of Abhi. Rajan is related to Rajiv as :  
 (a) Brother (b) Nephew (c) Cousin (d) Uncle

56. A man makes two types of furniture : chairs and tables. Profits are Rs. 20 per chair and Rs. 30 per table. Both the products are processed on two machines  $M_1$  and  $M_2$ . The time required for each product in hours and total time available in hours for each machine are as follows :

Machine	Chair	Table	Available Time
$M_1$	3	3	36
$M_2$	5	2	50

Constraints can be formulated by taking  $x$  = the number of chairs any  $y$  = the number of tables produced as :

- (a)  $x + y \leq 12$       (b)  $x + y \leq 12,$       (c)  $x + y \geq 12$       (d) None of these  
 $5x + 2y \geq 50$        $5x + 2y \leq 50$        $5x + 2y \leq 50$   
 $x \geq 0; y \geq 0$        $x \geq 0; y \geq 0$        $x \geq 0; y : \geq 0$
57. The nth term of the sequence  $\frac{1}{2}, \frac{1}{6}, \frac{1}{12}, \dots$  is  
 (a)  $\frac{1}{n^2-1}$       (b)  $\frac{1}{n^2+n}$       (c)  $\frac{1}{n^2-n}$       (d)  $\frac{1}{n^2+2}$
58. A company has two cars which it hires out during the day. The number of Cars demanded with mean 1.5. Then percentage of days on which only one car was in demand is equal to \_\_\_\_\_? Where  $e^{1.5} = 4.4815$ .  
 (a) 23.26      (b) 33.47      (c) 44.62      (d) 46.40
59. You are given the population of India for the courses of 1981 & 1991. You are to find the population of India at the middle of the period by averaging these population figures, assuming a constant rate of increase of population. What is the suitable form of average in this case ?  
 (a) A.M.      (b) G.M.      (c) H.M.      (d) none
60. Six persons A, B, C, D, E and F are sitting in two rows, three in each row.  
 (I) E is not at the end of any row  
 (II) D is second to the left of F  
 (III) C, the neighbor of E, is sitting diagonally opposite to D  
 (IV) B is the neighbor of F.  
 Which of the following are in one of the two rows ?  
 (a) F, B      (b) D, B and F      (c) C, E and B      (d) A, E and F
61. If  $f(x) = 100x$  then  $f^{-1}(x) =$   
 (a)  $\frac{x}{100}$       (b)  $\frac{1}{100x}$       (c)  $\frac{1}{100}$       (d) None of these
62. If Rs. 510 be divided among A, B, C in such a way that A gets  $\frac{2}{3}$  of what B gets and B gets  $\frac{1}{4}$  of what C gets, then their shares are respectively :  
 (a) Rs. 120, Rs. 240, Rs. 150      (b) Rs. 60, Rs. 90, Rs. 360  
 (c) Rs. 150, Rs. 300, Rs. 60      (d) None of these
63. Damages due to strikes, fires, political disturbances, floods, droughts, etc. are examples of \_\_\_\_\_ variation.  
 (a) Cyclical      (b) Trend      (c) Irregular      (d) Seasonal

64. If all the values are multiplied by the same quantity, the \_\_\_\_\_ & \_\_\_\_\_ also would be multiple of the same quantity.  
 (a) mean, standard deviation (b) mean, median  
 (c) mean, mode (d) All of the Above
65. If in a certain code, LUTE is written as MUTE and FATE is written as GATE, then how will BLUE be written in that code ?  
 (a) CLUE (b) GLUE (c) FLUE (d) SLUE
66. If  $(x + y) : (y + z) : (z + x) = 6 : 7 : 8$  and  $x + y + z = 14$  then the value of  $z$  is  
 (a) 4 (b) 5 (c) 7 (d) 6
67. If the sum of  $n$  terms of an A.P. is  $(3n^2 - n)$  and its common difference is 6 then its first term is \_\_\_\_\_.  
 (a)  $\pm 2$  (b)  $\pm 1$  (c) 1 (d) 2
68. The incidence of dengue disease in Laxmi Nagar (Delhi) is such that people of there have a 10% chance of suffering from it. What is the probability that out of 5 people 3 or more will suffer from this disease ?  
 (a) 0.005 (b) 0.0081 (c) 0.086 (d) None
69. Given that the standard deviation of a given set of observations is 2.336 and the mean is 83.8, find the coefficient of variation.  
 (a) 2.79 (b) 2.69 (c) 2.89 (d) 2.59
70. Six members of a family namely P, Q, R, S, T and U are travelling together. Q is the son of R but R is not the mother of Q. P and R are married couple. T is the brother of R. S is the daughter of P. U is the brother of Q. How many male members are there in the family ?  
 (a) 5 (b) 3 (c) 4 (d) 2
71. If  $\left| \frac{3x-4}{4} \right| \leq \frac{5}{12}$ , the solution set is :  
 (a)  $\left\{ x: \frac{19}{18} \leq x \leq \frac{29}{18} \right\}$  (b)  $\left\{ x: \frac{7}{9} \leq x \leq \frac{17}{9} \right\}$   
 (c)  $\left\{ x: \frac{-29}{18} \leq x \leq \frac{-19}{18} \right\}$  (d) None of these
72. If  $3 \log x - 4 \log y + 2 \log xy = \log z$  then the value of  $z$  in terms of  $x$  and  $y$  is  
 (a)  $\frac{x}{y}$  (b)  $\sqrt{\frac{y}{x}}$  (c)  $\frac{y^2}{x^5}$  (d)  $\frac{x^5}{y^2}$
73. Suppose 70% of the tourists who come to India will visit Agra while 60% will visit Goa and 50% will visit both Agra and Goa. What is the probability that the tourist will visit either Goa or Agra ?  
 (a) 0.2 (b) 0.8 (c) 0.95 (d) 0.1
74. The above data is 40, 50, 50, 56, 78, 80, 45, 80, 59, 34, 23, 90, 34, 45  
 (a) unimodal (b) multimodal (c) bimodal (d) None of these
75. From home Neha goes towards North for her college and then she turns left and then turns right, and finally she turns left and reaches college. In which direction her college is situated with respect to her home ?  
 (a) South – West (b) North – East  
 (c) North – West (d) South – East

76.  $\frac{3 + \log_{10} 343}{2 + \frac{1}{2} \log\left(\frac{49}{4}\right) + \frac{1}{3} \log\left(\frac{1}{125}\right)}$  is equal to  
 (a) 0 (b) 1 (c) 2 (d) 3
77. Mr. X invests 'P' amount at Simple Interest rate 10% and Mr. Y invests 'Q' amount at Compound Interest rate 5% compounded annually. At the end of two years both get the same amount of interest, then the relation between two amounts P and Q is given by :  
 (a)  $p = \frac{41Q}{80}$  (b)  $p = \frac{41Q}{40}$  (c)  $p = \frac{41Q}{100}$  (d)  $p = \frac{41Q}{200}$
78. A discrete random variable x follows uniform distribution and takes the values 5, 7, 12, 15, 18. The probability of P (X > 10) is  
 (a) 3/5 (b) 2/5 (c) 4/5 (d) None
79. A family has 2 boys and 3 girls, another family has 4 boys and 1 girl. One child is selected at random from each family, Find the probability both children are girls.  
 (a) 2/35 (b) 3/25 (c) 4/25 (d) 5/25
80. Find the Odd man out : 4, 10, 22, 46, 96, 190, 382  
 (a) 4 (b) 10 (c) 96 (d) 382
81. A person received the salary for the 1<sup>st</sup> year is Rs. 5,00,000 per year and the received an increment of Rs. 15,000 per year then the sum of the salary he taken in 10 years  
 (a) Rs. 56,75,000 (b) Rs. 72,75,000 (c) Rs. 63,75,000 (d) None of these
82. If  $a = 5^{1/3} + 5^{-1/3}$ , then the value of  $5a^3 - 15a$  is equal to  
 (a) 25 (b) 26 (c) 27 (d) 28
83. If 5% of the families in Delhi do not use gas as a fuel, what will be the probability of selecting 10 families in a random sample of 100 families who do not use gas as fuel ? You may assume Poisson distribution. [Given:  $e^{-5} = 0.0067$ ]  
 (a) 0.018 (b) 0.028 (c) 0.038 (d) 0.008
84. In a correlation study of two variables X and Y, the following values are obtained :  
 $\bar{X} = 45$ ,  $\bar{Y} = 54$ ,  $\sigma_x = 4$ ;  $\sigma_y = 5$ ;  $r = 0.8$ , The two regression coefficients ( $b_{xy}$ ,  $b_{yx}$ ) are  
 (a) (5.57, 3.12) (b) (0.64, 1.00) (c) (7.12, 2.67) (d) None of these
85. A driver drives 25 km towards west and turns to left and takes a driver of another 10 km. He then drives towards east another 10 km and then turns to his right and drives 12.5 km. After that he turns to his left and travels 15 km. In which direction is he now with respect to the starting point ?  
 (a) West (b) South (c) North (d) East
86. Mr. Paul borrows Rs. 20,000 on condition to repay it with C.I. at 5% p.a. in annual installments of Rs. 2000 each. The number of years for the debt to be paid off is  
 (a) 10 years (b) 12 years (c) 11 years (d) none of these
87. The simplification of  $\frac{(n-r+1)}{r} \cdot {}^n C_{r-1}$  is  
 (a)  ${}^{n+1} C_r$  (b)  ${}^n C_r$  (c)  ${}^{n-1} C_r$  (d)  ${}^{n+1} C_{r-1}$
88. From a well shuffled pack of 52 cards, 3 cards are drawn at random. Find the probability that three cards drawn contain two kings and one ace  
 (a)  $\frac{4}{5525}$  (b)  $\frac{5}{5525}$  (c)  $\frac{6}{5525}$  (d)  $\frac{7}{5525}$



89. In the following frequency distribution of the pulse rate of patients, one of the class frequencies is missing and the median is 78. Find the missing frequency.

Pulse Rate	64 – 68	68 – 72	72 – 76	76 – 80	80 – 84	84 – 88
No. of Patients	3	12	-	40	32	11

- (a) 28 (b) 32 (c) 31 (d) 29
90. Find the missing term: 1, 6, 15 ?, 45, 66, 91  
 (a) 25 (b) 26 (c) 27 (d) 28
91. If  $x, y, z$  are the terms in G.P. then the terms  $x^2 + y^2, xy + yz, y^2 + z^2$  are in :  
 (a) A.P. (b) G.P. (c) H.P. (d) None of these
92. The ratio compounded of 4 : 9, the duplicate ratio of 3 : 4, the triplicate ratio of 2 : 3 and 9 : 7 is  
 (a) 2 : 7 (b) 7 : 2 (c) 2 : 21 (d) none of these
93. Six fair coins are tossed simultaneously. Find the probability of getting at least 3 heads.  
 (a)  $\frac{11}{32}$  (b)  $\frac{15}{64}$  (c)  $\frac{1}{32}$  (d) None of the above
94. The probability that India wins a cricket match is 0.48. If India plays 3 matches, find the probability that India will win all the matches.  
 (a) 0.21 (b) 0.11 (c) 0.63 (d) 0.41
95. Five children are sitting in a row. S is sitting next to P but not T. K is sitting next to R, who is sitting on the extreme left and T is not sitting next to K. Who is / are adjacent to S ?  
 (a) R and P (b) K and P (c) Only P (d) P and T
96. An annuity consisting of payments of Rs. 500 made at the end of every 3 months for 4 years at the rate of 6% compounded quarterly. Its Future value is ....  
 (a) Rs. 8966.18 (b) Rs. 8108.60 (c) Rs. 9602.75 (d) none of these
97. If  $A = \{1, 2, 3\}$  then the relation  $R = \{(1, 1), (2, 3), (2, 2), (3, 3), (1, 2)\}$  on A is :  
 (a) Reflexive (b) Symmetric (c) Transitive (d) Equivalence
98. A textile worker in the city earns Rs. 3500 per month. The cost of living index for a particular month is 1360. Find the total expenditure on house and clothing.
- | Group             | Expenditure | Group Index |
|-------------------|-------------|-------------|
| Food              | 1400        | 180         |
| Clothing          | ?           | 150         |
| House rent        | ?           | 100         |
| Fuel and lighting | 560         | 110         |
| Miscellaneous     | 630         | 80          |
- (a) 910 (b) 810 (c) 490 (d) 420
99. Which of the following is a one-dimensional diagram ?  
 (a) Bar diagram (b) Pie diagram  
 (c) Line graph (d) Cylinder
100. Seema is the daughter – in – law of Sudhir and sister – in law of Ramesh, Mohan is the son of Sudhir, brother of Ramesh. Find the relation between Seema and Mohan.  
 (a) Sister – in – law (b) Aunt (c) Cousin (d) Wife