Question Paper Booklet No.

7023992

Time : 2 Hours

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Question Paper Booklet Code **S P K**

Roll No. | 4 | 0 | 4 | 1 | 1 | 7 |

Question Paper Booklet No. 7023992

Name of the Candidate Mohd. Arbaz farooqui

OMR Answer Sheet No. | 8 | 5 | 0 | 4 | 6 | 1 | 4 |

Arbaz

Signature of the Candidate

24

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1. In which of the following there is no impact of presence of extreme observations ?

    (A) Range   (B) Quartile deviation

    (C) Standard deviation   (D) Variance

2. If each observation of a set is divided by 10, then the Standard Deviation of the new observation is :

    (A) $\frac{1}{100}$th of Standard Deviation of original observation.

    (B) $\frac{1}{10}$th of Standard Deviation of original observation.

    (C) 100 times of Standard Deviation of original observation.

    (D) 10 times of Standard Deviation of original observation.

3. If the mean and median of a moderately asymmetrical series are 70.8 and 68.6 respectively, then the most probable mode is :

    (A) 75.2   (B) 64.2

    (C) 63.4   (D) 72.5

4. For a moderately-skewed distribution, which of the following relationship holds ?

    (A) Median – Mode = 3 (Mean – Median)

    (B) Mean – Mode = 3 (Mean – Median)

    (C) Mean – Median = 3 (Mean – Mode)

    (D) Mean – Median = 3 (Median – Mode)

5. What is the coefficient of range for the observations 20, 28, 32, 41, 48, 60 ?

    (A) 20   (B) 50

    (C) 40   (D) 200

6. Which one holds correct for any two events A and B ?

   (A) $P(A - B) = P(A) - P(A \cap B)$ (B) $P(A - B) = P(A) - P(B)$

   (C) $P(A - B) = P(B) - P(A \cap B)$ (D) $P(A - B) = P(B) + P(A \cap B)$

7. The Standard Deviation of the series 3, 6, 9, 12, 15 is :

   (A) 6.36

   (C) 4.12

   (B) 4.24

   (D) 3.28

8. The quartile deviation of the distribution of the following data is :

x	2	3	4	5	6
$f(x)$	2	4	8	4	1

   (A) 1

   (C) 1/4

   (B) 0

   (D) 1/2

9. Which of the following pairs of events are mutually exclusive ?

   (A) A : Archna was born in India.

      B : She is a fine lawyer.

   (B) A : The student studies in a school.

      B : He studies Geography.

   (C) A : Sita is 16 years old.

      B : She is a good folk dancer.

   (D) A : Imran is under 15 years of age.

      B : He is a voter of Delhi.

10. The probability of success of three students in CA Foundation examination are 1/5, 1/4 and 1/3 respectively. Find the probability that at least two students will get success.

    (A) 3/4

    (B) 2/5

    (C) 1/6

    (D) 1/5

11. If $P(A) = 0.65$ and $P(B) = 0.15$, then $P(\overline{A}) + P(\overline{B})$ is :

    (A) 1.2

    (B) 1.5

    (C) 0.8

    (D) 0.35

12. Eight labourers are working at a construction site with the following wages for each day of working (in ₹) :

    500, 620, 400, 700, 450, 560, 320, 450

    If one of the workers is selected at random, what is the probability that his wage would be less than the average wage ?

    (A) 0.375

    (B) 0.625

    (C) 0.500

    (D) 0.450

13. A box contains shoe pairs of same pattern of different sizes numbered from 1 to 12. If a shoe pair is selected at random, what is the probability that the number on the shoe pair will be a multiple of 5 or 6 ?

    (A) 0.25

    (B) 0.33

    (C) 0.20

    (D) 0.375

14. Two cards are drawn at random from a pack of 52 cards. The probability of getting either both the red cards or both Kings cards is :

    (A) 0.4288

    (B) 0.2488

    (C) 0.8248

    (D) 0.8428

15. In a class of 100 students, the mean marks was 50 with standard deviation 14.9. Assuming the distribution of marks to be normal, find the number of students who obtained more than 70% marks [at Z = 1.34, area = 0.4099].

    (A) 9

    (B) 10

    (C) 8

    (D) 7

16. If a random variable X follows Poisson distribution such that P(X = 1) = P(X = 2), then the mean of the distribution is :

    (A) 1

    (B) 2

    (C) 0

    (D) 1/2

17. The quartile deviation of a normal distribution with Mean of 10 and Standard Deviation of 4 is :

    (A) 3.20

    (B) 2.70

    (C) 0.675

    (D) 6.75

18. If X and Y are 2 independent normal variables with mean as 10 and 12 and Standard Deviation (S.D.) as 3 and 4 respectively, then (X + Y) is normally distributed with :

    (A) Mean = 22 and S.D. = 25

    (B) Mean = 22 and S.D. = 7

    (C) Mean = 22 and S.D. = 5

    (D) Mean = 22 and S.D. = 49

19. The number of accidents in a year attributed to taxi drivers in a locality follows Poisson distribution with average 2. Out of 500 taxi drivers of that area, what is the number of drivers with at least 3 accidents in a year ? (Given that e = 2.718)

    (A) 180

    (B) 162

    (C) 201

    (D) 190

20. Which of the following statement is correct ?

    (A) Regression coefficients are independent of origin and scale.

    (B) Both regression coefficients must be less than unity.

    (C) The regression lines of two independent variables are parallel to each other.

    (D) If two regression lines coincide with each other, there is no correlation between the variates.

21. Which one of the following statement is correct regarding limit of the two regression coefficients ?

    (A) Must be positive.

    (B) No limit.

    (C) One positive and the other negative.

    (D) Product of the regression coefficients must be numerically less than unity.

22. In case of "Insurance companies' profits" and "The number of claims they have to pay", there exists a :

    (A) Negative correlation   (B) Positive correlation

    (C) No correlation   (D) It cannot be predicted

23. The variance of two variables 'x' and 'y' are 16 and 25 and covariance between 'x' and 'y' is 18.5. Another two variables 'u' and 'v' are defined as u = (x − 3)/2 and v = (y − 2)/3, then coefficient of correlation between 'u' and 'v' is :

    (A) 0.875   (B) 0.85

    (C) 0.90   (D) 0.925

24. The consumer price index for the year 2023 is 273 with 2010 as base year. The average monthly wages of industrial worker in year 2023 is ₹ 8,190. What is the real wage ?

    (A) ₹ 3,000   (B) ₹ 2,800

    (C) ₹ 3,200   (D) ₹ 3,400

25. Time Reversal test is satisfied by :

    (A) Paasche's method but not Laspeyre's method

    (B) Laspeyre's method but not Fisher's method

    (C) Fisher's method

    (D) Laspeyre's method and Fisher's method

26. The value index is equal to :

    (A) The total sum of the values of a given year plus the sum of the values of the base year.

    (B) The total sum of the values of a given year multiplied by the sum of the values of the base year.

    (C) The total sum of the values of a given year divided by the sum of the values of the base year.

    (D) The total sum of the values of a given year minus the sum of the values of the base year.

27. During a certain period the cost of living index goes up from 110 to 200 and the salary of a worker is also raised from ₹ 330 to ₹ 500, then in the real terms, the raise in salary is effectively-

    (A) Gain by ₹ 75   (B) Gain by ₹ 50

    (C) Loss by ₹ 90   (D) Loss by ₹ 50

28. Which one of the following test of adequacy is concerned with the measurement of price changes over a period of years, when it is desirable to shift the base ?

    (A) Time Reversal test   (B) Unit test

    (C) Circular test   (D) Factor Reversal test

29. What is the value of $\left(\dfrac{x^b}{x^c}\right)^{(b+c-a)} * \left(\dfrac{x^c}{x^a}\right)^{(c+a-b)} * \left(\dfrac{x^a}{x^b}\right)^{(a+b-c)}$?

    (A) $x^{(a+b+c)}$ (B) x^{abc}

    (C) -1 (D) 1

30. A number consists of two digits. The digits in the ten's place is 3 times the digit in the unit's place. If 54 is subtracted from the number, then the digits are reversed. The number is :

    (A) 62   (B) 39

    (C) 93   (D) 31

31. A person purchased 2 apples and 5 bananas at the cost of ₹ 90. Later he visited to another shop where shopkeeper told him that if you give me ₹ 50 and one banana, I can give you 3 apples. He agreed to the deal. What is the cost of one apple and one banana ?

    (A) (10, 15)   (B) (15, 10)

    (C) (10, 20)   (D) (20, 10)

32. The ratio of income of A and B is 5 : 4 and their expenditure is 3 : 2. If at the end of year each saves ₹ 1,600, then the income of A is :

    (A) ₹ 3,600   (B) ₹ 3,400

    (C) ₹ 4,000   (D) ₹ 4,400

33. The mean proportional between $12x^2$ and $27y^2$ is :

    (A) $81xy$ (B) $18xy$

    (C) $8xy$ (D) $19.5xy$

34. $\log_2 \log_2 \log_4 256 + 2 \log_{\sqrt{2}} 2$ is equal to :

    (A) 3   (B) 2

    (C) 5   (D) 7

35. A dietician recommends mixture of two kinds of foods to a person so that mixture contains at least 45 units of carbs, 25 units of protein, 15 units of fat and 15 units of fibre. The above contents of nutrients are available in the foods as below :

	Carbs	Protein	Fat	Fibre
Food-1	20	5	3	2
Food-2	10	2	4	5

If 'x' units of food-1 is mixed with 'y' units of food-2, how dietician recommendation can be expressed ?

(A) $20x + 10y \le 25; 5x + 2y \ge 45; 3x + 4y \le 15; 2x + 5y \ge 15; x \ge 0; y \ge 0$

(B) $20x + 10y \le 45; 5x + 2y \ge 25; 3x + 4y \le 15; 2x + 5y \ge 15; x \ge 0; y \ge 0$

(C) $20x + 10y \ge 45; 5x + 2y \ge 25; 3x + 4y \ge 15; 2x + 5y \ge 15; x \ge 0; y \ge 0$

(D) $20x + 10y \le 45; 5x + 2y \le 25; 3x + 4y \le 15; 2x + 5y \le 15; x \ge 0; y \ge 0$

36. If one of the root of the equation $x^2 - 3x + k = 0$ is 1, then the value of 'k' is :

(A) 1   (B) 2

(C) −2   (D) −1

37. If one of the root of the cubic equation $3x^3 - 5x^2 - 11x - 3 = 0$ is $-\frac{1}{3}$, then other two roots are :

(A) −1 & 3   (B) 1 & 3

(C) 1 & −3   (D) −1 & −3

38. The shaded area is represented by which of the following option ?

(A) $x + y < 6; 2x - y > 0; x < 0$

(B) $x + y > 6; 2x - y > 0; x > 0$

(C) $x + y > 6; 2x - y < 0; x > 0$

(D) $x + y > 6; 2x - y > 0; x < 0$
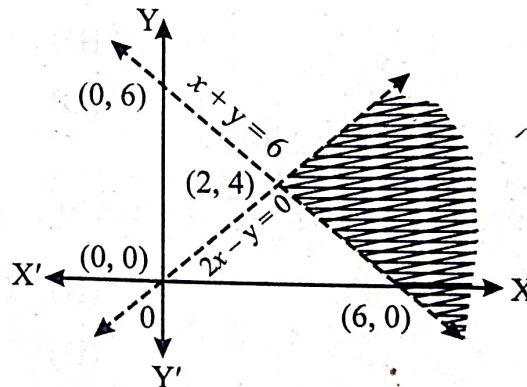
39. The value of a machine depreciates every year at the rate of 10% per annum, on its value at the beginning of that year. If the present value of the machine is ₹ 72,900, then machine's worth 3 years ago was :

    (A) ₹ 80,000   (B) ₹ 94,710

    (C) ₹ 1,00,000   (D) ₹ 75,087

40. What is the effective rate of interest when principal amount of ₹ 50,000 deposited in a nationalized bank for one year, corresponding to a nominal rate of interest 6% per annum payable half yearly ?

    (A) 6.07%   (B) 6.06%

    (C) 6.08%   (D) 6.09%

41. Kanta wants to accumulate ₹ 4,91,300 in her savings account after three years. The rate of interest offered by bank is $6\frac{1}{4}$ % per annum compounded annually. How much amount should she invest today to achieve her target amount ?

    (A) ₹ 4,37,500   (B) ₹ 4,09,600

    (C) ₹ 46,900   (D) ₹ 49,600

42. The sum required to earn a monthly interest of ₹ 1,200 at 18% per annum simple interest is :

    (A) ₹ 60,000   (B) ₹ 50,000

    (C) ₹ 80,000   (D) ₹ 66,000

43. The compound interest on ₹ 40,000 at 12% per annum compounded quarterly for 6 months is :

    (A) ₹ 2,463   (B) ₹ 2,643

    (C) ₹ 2,364   (D) ₹ 2,436

44. At a certain rate of interest per annum, the difference between the compound interest and simple interest on ₹ 3,00,000 for two years is ₹ 480, then the rate of interest per annum is :

    (A) 4%   (B) 2%

    (C) 6%   (D) 8%

45. What is the present value of ₹ 1,000 to be received after two years compounded annually at 10% interest rate ?

(A) ₹ 826

(B) ₹ 800

(C) ₹ 836

(D) ₹ 835

46. Mr. X makes a deposit of ₹ 12,000 in a bank where the amount doubles at compound interest in 5 years, then what will be the total amount he will have after twenty years ?

(A) ₹ 1,20,000

(B) ₹ 96,000

(C) ₹ 1,24,000

(D) ₹ 1,92,000

47. The Earning Per Share (EPS) of a company for five years is given below :

Year	2019	2020	2021	2022	2023
EPS	40	25	40	60	90

Calculate the Compounded Annual Growth Rate (CAGR) of EPS.

(A) 23.47%

(B) 24.47%

(C) 22.47%

(D) 21.47%

48. In an account paying interest @ 9% per year compounded monthly, ₹ 200 is invested at the end of each month. What is the future value of this annuity after 10th payment ?

{Where $(1.0075)^{10} = 1.0775$}

(A) ₹ 2,066

(B) ₹ 1,022

(C) ₹ 2,044

(D) ₹ 2,155

49. A Perpetuity has a cash flow of ₹ 625 and a required rate of return of 8%. If the cash flow is expected to grow at a constant rate of 4% per year, then the intrinsic value of this perpetuity (present value of growing perpetuity) is :

(A) ₹ 13,000

(B) ₹ 15,625

(C) ₹ 14,250

(D) ₹ 16,667

50. What is the annual contribution required by an organization to accumulate ₹ 20,00,000 in ten years for the construction of a new manufacturing plant, utilizing a sinking fund with an annual interest rate of 6% compounded annually ?

{Where A(10, 0.06) = 13.180785}

(A) ₹ 1,67,440.90

(B) ₹ 1,51,736.03

(C) ₹ 1,75,433.60

(D) ₹ 1,83,714.28

51. An investor intends to purchase a three year ₹ 1,000 par value bond having nominal interest rate of 10%. At what price the bond may be purchased now, if it matures at par and the investor requires a rate of return of 14% ?

(A) ₹ 907.125

(B) ₹ 904

(C) ₹ 905.25

(D) ₹ 909

52. A loan of ₹ 16,550 is to be paid in three equal annual instalments at compound interest. The value of annual instalment, if the rate of interest is 10% per annum is :

(A) ₹ 1,243

(B) ₹ 6,655

(C) ₹ 6,565

(D) ₹ 1,343

53. A selection is to be made for one post of Principal and two posts of Vice-Principal. Amongst the six candidates called for the interview, only two are eligible for the post of Principal, while they all six are eligible for the post of Vice-Principal. The number of possible combinations for the selection is :

    (A) 12   (B) 4

    (C) 18   (D) 20

54. A roadside tea stall merchant borrows ₹ 9,000 at 2.76% Simple Interest per annum. The principal and the interest are to be paid in 10 monthly instalments. If each instalment is double than the preceding one, find the value of the last instalment.

    (A) 4,608   (B) 1,024

    (C) 9,207   (D) 4,096

55. In a class of 4 boys and 3 girls, they are required to sit in a row in such a way that no two girls can sit together. Compute, in how many different ways they can sit together.

    (A) 480   (B) 60

    (C) 720   (D) 1,440

56. How many total combinations can be formed of 8 different counters marked as 1, 2, 3, 4, 5, 6, 7 & 8, taking 4 counters at a time and there being at least one odd and one even numbered counter in each combination ?

    (A) 66   (B) 68

    (C) 64   (D) 62

57. In a party every person shakes hands with every other person. If there are 105 handshakes in total, find the number of persons in the party.

    (A) 15   (B) 14

    (C) 21   (D) 22

58. Let A = {1, 2, 3} and consider the relation R = {(1, 1), (2, 2), (3, 3), (1, 2), (2, 3), (1, 3)}, then R is

 (A) Reflexive but not symmetric

 (B) Reflexive but not transitive

 (C) Symmetric and Transitive

 (D) Neither symmetric nor transitive

59. If $f(x) = x^2 + x - 1$ and $4f(x) = f(2x)$, then find the value of 'x'.

 (A) 2/3

 (B) 3/2

 (C) 3/4

 (D) 4/3

60. If for an infinite geometric progression, first term is 'a', common ratio is 'r', the sum is 8 and the second term is $\dfrac{7}{8}$, then :

 (A) $a = 4$ & $r = \dfrac{7}{16}$

 (B) $a = 3$ & $r = \dfrac{7}{24}$

 (C) $a = 7$ & $r = \dfrac{1}{8}$

 (D) $a = 2$ & $r = \dfrac{7}{32}$

61. The numbers x, 8, y are in G.P. and the numbers x, y, −8 are in A.P. The values of x and y respectively shall be :

 (A) 4, 16

 (B) 16, 4

 (C) 4, 8

 (D) 8, 4

62. If fourth term of A.P. series is zero, then what is the ratio of twenty-fifth term to eleventh term ?

 (A) 4

 (B) 5

 (C) 3

 (D) 2

63. If $x = t^2$ and $y = t^3$, then $\dfrac{d^2y}{dx^2}$ is equal to :

    (A) $\dfrac{3}{4t}$

    (B) $\dfrac{3t}{2}$

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

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

64. $\displaystyle\int \log_e x \, dx$ is equal to :

    (A) $x \log_e\left(\dfrac{x}{e}\right) + c$

    (B) $x \log_e (ex) + c$

    (C) $x \log_e\left(\dfrac{e}{x}\right) + c$

    (D) $\log_e\left(\dfrac{x}{e}\right) + c$

65. If a set contain n elements, then the total number of proper subsets of set is :

    (A) $2^n - 1$

    (B) 2^n

    (C) 2^{n-1}

    (D) $2^n - 2$

66. A town has a total population of 50,000. Out of it 28,000 read the newspaper 'X' and 23,000 read newspaper 'Y', while 4,000 read both the newspapers. The number of persons not reading any of the two newspapers are :

    (A) 3,000

    (B) 2,000

    (C) 2,500

    (D) 5,000

67. If $x^y \times y^x = 16$, then the value of $\dfrac{dy}{dx}$ at $(2, 2)$ is :

    (A) 0

    (B) −1

    (C) 2

    (D) −2

68. Find the odd man out from the following series : 7, 23, 47, 119, 171, 287

    (A) 171   (B) 119

    (C) 287   (D) 7

69. In a certain code, RIPPLE is written as 613382 and LIFE is written as 8192. How is PILLER written in that code ?

    (A) 318286   (B) 318826

    (C) 618826   (D) 338816

70. AZ, GT, MN,....., YB, EV . The value at blank space (.....) will be :

    (A) SH   (B) JH

    (C) SK   (D) TS

71. Evaluate the following integral $\int \dfrac{1}{x(x^5 + 1)}\, dx$.

    (A) $\dfrac{1}{5} \log\left(\dfrac{x^5}{x^5+1}\right) + c$

    (B) $\log\left(\dfrac{x^5}{x^5+1}\right) + c$

    (C) $\dfrac{1}{3} \log\left(\dfrac{x^5}{x^5+1}\right) + c$

    (D) $\dfrac{1}{3} \log\left(\dfrac{x^5+1}{x^5}\right) + c$

72. Find the next number in the series 2, 5, 11, 23, 47, ...

    (A) 95   (B) 84

    (C) 98   (D) 105

73. If TAP is coded as SZO in a language, then how is FRIEND coded in same language ?

    (A) QEDHCM   (B) CMDHQE

    (C) EQIENE   (D) EQHDMC

74. One morning after sunrise, A and B were talking to each other face to face very closely at a crossing point. If B's shadow was exactly to the right of A, in which direction B was facing ?

    (A) West   (B) East

    (C) North   (D) South

75. In a multi-storey building on one floor there are six flats in two rows facing East and West and they are allotted to A, B, C, D, E, and F. B gets an East facing flat, which is not next to D. F and D gets diagonally opposite flat. A gets a West facing flat and E gets an East facing flat. Whose flat is between A and F ?

    (A) C   (B) B

    (C) D   (D) F

76. Balkrishna is Ritik's neighbour and his house is 200 meters away in the north-west direction from Ritik's house. Jayendra is Ritik's neighbour and his house is located 200 meters away in the south-west direction from Ritik's house. Girdhari is Jayendra's neighbour and he stays 200 meters away in the south-east direction from Jayendra's house. Ritik is Girdhari's neighbour and his house is located 200 meters away in north-east direction from Girdhari's house. Then where is the position of Ritik's house in relation to Balkrishna's ?

    (A) South-West   (B) South-East

    (C) North   (D) North-East

77. If Ajay stands on his head with his face towards North, in which direction will his left hand point ?

    (A) North   (B) North-East

    (C) East   (D) North-West

78. If Kiran put her time-piece on the table in such a way that at 6:00 PM, hour hand points to East. In which direction the minute hand will be at 9:30 PM ?

   (A) North-West   (B) South-East

   (C) East   (D) West

79. Six persons A, B, C, D, E and F are sitting in a row in a straight line. B is between F & D. E is between A & C. A does not sit next to F or D; C does not sit next to D. F is between which of the following persons ?

   (A) B & C   (B) B & E

   (C) B & D   (D) B & A

80. In a school cultural committee meeting, four girls Dipti, Aruna, Chandra, Bindu and four boys Gautam, Faneesh, Harendra, Eshaan are sitting in a circle around a table, facing each other as under :

   (i)   No two girls or boys are sitting side by side.

   (ii)   Chandra, who is sitting between Gautam and Eshaan, is facing Dipti.

   (iii) Faneesh is between Dipti and Aruna and facing Gautam.

   (iv)   Harendra is to the right of Bindu.

   Identify the person whom Eshaan is facing.

   (A) Bindu   (B) Faneesh

   (C) Gautam   (D) Harendra

Note : Read the following information carefully and answer the questions (**81** to **82**) given below :

Six persons B, D, C, M, J and K are split into groups of three each and are made to stand in two rows in such a way that a person in one row is exactly facing a person in the other row. M is not at the ends of any row and is to the right of J, who is facing C. K is to the left of D, who is facing M.

81. Which of the following persons are in the same row ?

    (A) BMJ   (B) BDC

    (C) MJK   (D) MJD

82. Who is to the immediate left of B ?

    (A) J   (B) M

    (C) D   (D) K

83. During an interview, seven applicants sitting in a row are awaiting their turn. Chandresh is sitting left to Kuldeep but on the right to Diksha, Reshma is sitting right to Kuldeep, Priyanka is sitting right to Gayatri but left to Diksha. Himani is sitting left to Gayatri. The person sitting in the middle must be :

    (A) Diksha   (B) Chandresh

    (C) Gayatri   (D) Priyanka

84. A is B's Father. C is B's mother. D is C's Son. E is A's mother. Then how is A related to D ?

    (A) Grandson   (B) Uncle

    (C) Granddaughter   (D) Father

85. Pointing to a man in photograph, a woman said "The father of his brother is only son of my grandfather", then how is that woman related to the man in photograph ?

    (A) Sister   (B) Daughter

    (C) Mother   (D) Aunty

86. The Secondary data is collected by :

   (A) Observation method.

   (B) International source like World Bank.

   (C) Interview method.

   (D) Mailed questionnaire method.

87. Exit polls are an example of which method of collecting data ?

   (A) Investigation   (B) Random sampling

   (C) Census   (D) Quota sampling

88. A family consists of six members P, Q, R, S, T & U. There are two married couples. Q is a doctor and father of T; U is grandfather of R and is a contractor; S is grandmother of T and is a house-wife. There is one doctor, one contractor, one Professor, one house-wife and two students in the family. Find who is the husband of P.

   (A) S   (B) T

   (C) R   (D) Q

89. P is the son of Q while Q & R are sisters to one another. T is the mother of R. If S is son of T, how S is related to P ?

   (A) Cousin   (B) Brother

   (C) Maternal uncle   (D) Nephew

90. Sandhya is the daughter-in-law of Shailesh and sister-in-law of Rajan. Manak is son of Shailesh and only brother of Rajan. Then, how Sandhya is related to Manak ?

   (A) Aunty   (B) Sister-in-law

   (C) Cousin   (D) Wife

91. The Ogive can be used for making

    (A) medium term projection   (B) short term projection

    (C) long term projection   (D) group frequency distribution

92. Numerical data presented in descriptive form are called :

    (A) Tabular presentation   (B) Classified presentation

    (C) Textual presentation   (D) Graphical presentation

93. The distribution of commuters coming to a Metro station from early morning hours to peak morning hours follows which type of frequency curve ?

    (A) J-shaped curve   (B) Bell shaped curve

    (C) U-shaped curve   (D) Mixed curve

94. What is the range of a data set ?

    (A) The difference between the mean and median of the data set

    (B) The difference between the highest and lowest values in the data set

    (C) The number of data points in the data set

    (D) The standard deviation of the data set

95. Series in which frequencies are continuously added corresponding to each class interval in the series :

    (A) Cumulative frequency series   (B) Frequency

    (C) Deviation   (D) Mid value

96. The mean of a group X is 70 and the mean of group Y is 85. If the number of observations in group Y is five times that of group X, then the combined mean of both the groups is :

(A) 80

(B) 75

(C) 77.5

(D) 82.5

97. The Median of the following frequency distribution is :

x	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
f(x)	8	30	40	12	10

(A) 22.5

(B) 33

(C) 23

(D) 24

98. What type of data is most appropriate for representing using a Pie chart ?

(A) Categorical data

(B) Continuous data

(C) Ordinal data

(D) Interval data

99. If the class intervals of certain data are 10-14, 15-19, 20-24, then the first class boundaries is

(A) 10-14

(B) 9.5-14.5

(C) 10-15

(D) 10.5-15.5

100. What is the purpose of stratified random sampling ?

(A) To divide the population into subgroups and then randomly sample from each subgroup.

(B) To ensure that every individual in the population has an equal chance of being selected.

(C) To select individuals based on their availability and convenience.

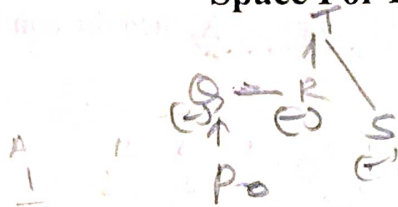(D) To select a fixed percentage of the population without any specific criteria.

SPK

Space For Rough Work

$$1000 = P\left(1+\frac{10}{100}\right)^2$$

$$1000 = P\left(\frac{110}{100} \times \frac{110}{100}\right)$$

$$1000 = P \times \frac{110 \times 110}{19900}$$

$$3 \times \frac{1}{3} \times \frac{1}{3} \times \frac{9}{3} - 5 \times \frac{1}{3} \times \frac{1}{3} - 11 \times \frac{1}{3} - 13$$
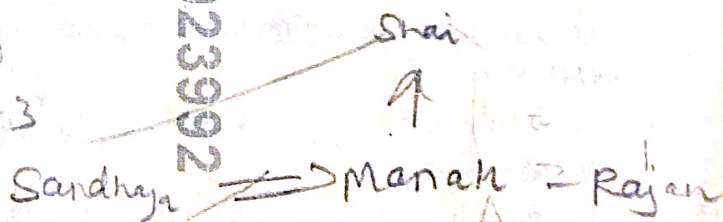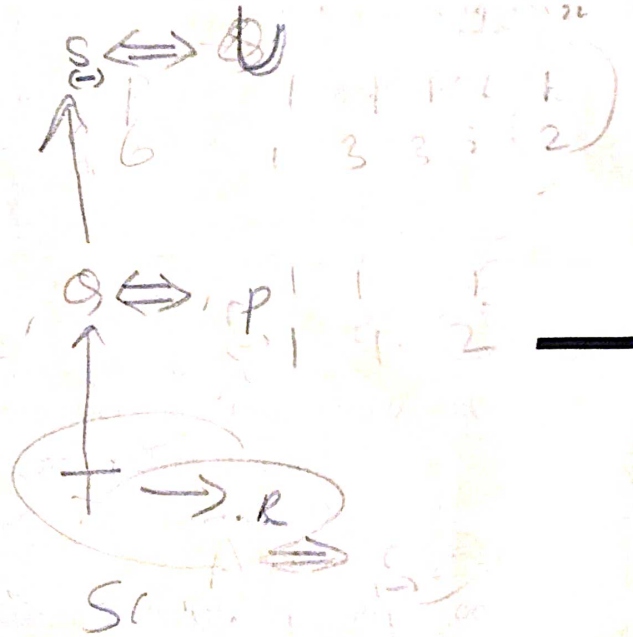
$$-\frac{1}{9} + \frac{5}{9} + \frac{11}{3} - 3$$

$$-\frac{1}{9} + \frac{5}{9} + \frac{33}{9} - \frac{9}{3} = 0$$

$$\frac{12}{9} = 0$$

Sandhya ⟶ Manah = Rajan

Shai
9

SPK