

Roll No. ....

Question Booklet Number

O. M. R. Serial No.

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Question Booklet Number
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**M. A./M. Sc. (Second Semester)**  
**(NEP) EXAMINATION, 2025-26**  
**MATHEMATICS**  
**(Introductory Statistical Methods)**

Paper Code							
B	0	3	0	8	0	9	T

Questions Booklet Series
<b>D</b>

Time : 1:30 Hours ]

[ Maximum Marks : 75

**Instructions to the Examinee :**

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.

**परीक्षार्थियों के लिए निर्देश :**

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, तो उसे तुरन्त बदल लें।

(Remaining instructions on the last page)

(शेष निर्देश अन्तिम पृष्ठ पर)

***(Only for Rough Work)***

1. Variance of a distribution is  $V$ . If each value of the variance be multiplied by a constant quantity  $K$ , the new variance is :
- (A)  $V$   
 (B)  $KV$   
 (C)  $K^2V$   
 (D)  $2KV$
2. If the coefficient of variation and standard deviation are 60 and 21 respectively, the arithmetic mean of the distribution is :
- (A) 60  
 (B) 30  
 (C) 35  
 (D) 21
3. In a frequency distribution, the mean and median are 21 and 22 respectively, then its mode is approximately :
- (A) 20.5  
 (B) 25.5  
 (C) 24  
 (D) 22
4. Standard deviation for first 10 natural numbers is :
- (A) 5.5  
 (B) 3.87  
 (C) 2.97  
 (D) 2.87
5. Find out the fallacy if any, in the statement :
- “The mean and the variance of a binomial distribution is 16.2 and 29.4 respectively.”
- (A)  $p = \frac{49}{27}$  is not possible  
 (B)  $q = \frac{49}{27}$  is not possible  
 (C) The statement is not true  
 (D)  $p = \frac{47}{27}$  is not possible

6. The relation between standard deviation and variance is :

(A)  $S.D. = \sqrt{\text{Variance}}$

(B)  $S.D. = \text{Variance}$

(C)  $(S.D.)^2 = \text{Variance}$

(D) None of the above

7. Write the formula of the co-efficient of range :

(A)  $\frac{X_{\max} - X_{\min}}{X_{\max} + X_{\min}}$

(B)  $\frac{X_{\max} + X_{\min}}{X_{\max} - X_{\min}}$

(C)  $\frac{X_{\min} - X_{\max}}{X_{\min} + X_{\max}}$

(D) None of the above

8. Write the formula of the co-efficient of quartile deviation :

(A)  $\frac{Q_2 - Q_1}{Q_2 + Q_1}$

(B)  $\frac{Q_2 + Q_1}{Q_2 - Q_1}$

(C)  $\frac{Q_3 - Q_1}{Q_3 + Q_1}$

(D) None of the above

9. Quartile deviation is :

(A)  $\frac{Q_3 + Q_1}{2}$

(B)  $\frac{Q_3 - Q_1}{2}$

(C)  $\frac{Q_2 + Q_1}{2}$

(D)  $\frac{Q_2 - Q_1}{2}$

10. Inter Quartile Range is :

(A)  $Q_3 - Q_1$

(B)  $Q_3 + Q_1$

(C)  $Q_2 - Q_1$

(D)  $Q_2 + Q_1$

11. What is the principle of governing the choice distribution ?
- (A) Number of class intervals  
 (B) The length of class intervals  
 (C) The mid-point of the class intervals  
 (D) None of the above
12. Which value of 'a' gives the minimum ?
- (A) Mean square deviation from 'a'  
 (B) Mean deviation from 'a'  
 (C) Mean deviation equal to 'a'  
 (D) None of the above
13. The measure of kurtosis is :
- (A)  $\beta_2 = 0$   
 (B)  $\beta_2 = 3$   
 (C)  $\beta_2 = 4$   
 (D)  $\beta_2 = 6$
14. For a symmetric distribution :
- (A)  $\mu_2 = 0$   
 (B)  $\mu_2 > 0$   
 (C)  $\mu_3 > 0$   
 (D)  $\mu_3 = 0$
15. For any frequency distribution, the kurtosis is :
- (A) Greater than 1  
 (B) Less than 1  
 (C) Equal to 1  
 (D) None of the above
16. In a frequency curve of scores, the mode was found to be higher than the mean. This shows that the distribution is :
- (A) Symmetric  
 (B) Negatively skewed  
 (C) Positively skewed  
 (D) Normal

17. The standard deviation of a distribution is 5. The value of the fourth central moment ( $\mu_4$ ) in order that the distribution be mesokurtic should be :
- (A) Equal to 3
  - (B) Greater than 1875
  - (C) Equal to 1875
  - (D) Less than 1875
18. The statement that the variance is equal to the second central moment is :
- (A) Always true
  - (B) Sometime true
  - (C) Never true
  - (D) Ambiguous
19. The limits for quartile coefficient of skewness are :
- (A)  $\pm 3$
  - (B) 0 and 3
  - (C)  $\pm 1$
  - (D)  $\pm \infty$
20. A.M., G.M. and H.M. in any series are equal when :
- (A) The distribution is symmetric
  - (B) All the values are same
  - (C) The distribution is positively skewed
  - (D) The distribution is unimodal
21. The appropriate measure whenever the extreme items are to be disregarded and when the distribution contains indefinite classes at the end is :
- (A) Median
  - (B) Mode
  - (C) Quartile deviation
  - (D) Standard deviation

22. If the each of a set of observations of a variable is multiplied by constant (none zero) value, the variance of the resultant variable :
- (A) is unaltered
- (B) increases
- (C) decreases
- (D) is unknown
23. In any discrete series (when all the values are not same) the relation between M.D. about mean and S.D. is :
- (A)  $M.D. = S.D.$
- (B)  $M.D. \geq S.D.$
- (C)  $M.D. < S.D.$
- (D)  $M.D. \leq S.D.$
24. The sum of squares of deviations is least when measured from :
- (A) Median
- (B) Mean
- (C) Mode
- (D) None of the above
25. Sum of absolute deviations about median is :
- (A) Least
- (B) Greatest
- (C) Zero
- (D) None of the above
26. If the events S and T have equal probability and are independent with  $P(S \cap T) = P > 0$ , then  $P(S) =$  :
- (A)  $\sqrt{P}$
- (B)  $P^2$
- (C)  $\frac{P}{2}$
- (D) P

27. What is the probability that a bridge hand contains one card of each denomination i.e., one ace, one king, one queen ..... one three, one two :

(A)  $\frac{13!}{13^{13}}$

(B)  $\frac{4^{13}}{52C_{13}}$

(C)  $\frac{52C_4}{52C_{13}}$

(D)  $\left(\frac{1}{13}\right)^{13}$

28. The probability that a 3-card hand drawn at random and without replacement from an ordinary deck consists entirely of black cards is :

(A)  $\frac{1}{17}$

(B)  $\frac{2}{17}$

(C)  $\frac{1}{8}$

(D)  $\frac{4}{17}$

29. A and B are two independent events such that  $P(\bar{A}) = 0.7$ ,  $P(\bar{B}) = K$  and  $P(A \cup B) = 0.8$ . Then K is :

(A)  $\frac{5}{7}$

(B) 1

(C)  $\frac{2}{7}$

(D) None of the above

30. If A and B are mutually exclusive events, then :

(A)  $P(A \cup B) = P(A) \cdot P(B)$

(B)  $P(A \cup B) = P(A) + P(B)$

(C)  $P(A \cup B) = 0$

(D)  $P(A \cup B) = 1$

31. A single letter is selected at random from the word PROBABILITY. The probability that it is a vowel is :

(A)  $\frac{3}{11}$

(B)  $\frac{2}{11}$

(C)  $\frac{4}{11}$

(D) 0

32. In the simultaneous tossing of two perfect dice, the probability of obtaining 4 as the sum of the resultant faces is :

(A)  $\frac{4}{12}$

(B)  $\frac{1}{12}$

(C)  $\frac{3}{12}$

(D)  $\frac{2}{12}$

33. In the simultaneous tossing of two perfect coins, the probability of having at least one head is :

(A)  $\frac{1}{2}$

(B)  $\frac{1}{4}$

(C)  $\frac{3}{4}$

(D) 1

34. A coin is tossed three times in succession. The number of sample points in sample space is :

(A) 6

(B) 8

(C) 3

(D) 9

35. The probability of drawing one white ball from a bag containing 6 red, 8 black, 10 yellow and 1 green balls is :

(A)  $\frac{1}{25}$

(B) 0

(C) 1

(D)  $\frac{24}{25}$

36. The probability of drawing one spade card from a pack of cards is :

(A)  $\frac{1}{52}$

(B)  $\frac{1}{13}$

(C)  $\frac{4}{13}$

(D)  $\frac{1}{4}$

37. The point of intersection of the 'less than' and the 'more than' ogive corresponds to :
- (A) The mean  
 (B) The median  
 (C) The geometric mean  
 (D) None of the above
38. The mean of the distribution in which the values of  $x$  are 1, 2, 3, .....  $n$ , the frequency of each being unity is :
- (A)  $\frac{n(n+1)}{2}$   
 (B)  $\frac{n}{2}$   
 (C)  $\frac{(n+1)}{2}$   
 (D) None of the above
39. 10 is the mean of a set of 7 observations and 5 is the mean of a set of 3 observations. The mean of combined set is given by :
- (A) 15  
 (B) 10  
 (C) 8.5  
 (D) 7.5
40. The most stable measure of central tendency is :
- (A) The mean  
 (B) The median  
 (C) The mode  
 (D) None of the above
41. The algebraic sum of deviations of a set of  $n$  values from their arithmetic mean is :
- (A) 0  
 (B)  $n$   
 (C) 1  
 (D) None of the above
42. Which of the following is true in respect of any distribution ?
- (A) The percentile points are equispaced  
 (B) A unique median value exists for each and every distribution  
 (C) The percenile points are in the ascending order  
 (D) None of the above

43. Which of the following is true for all sets of data ?

- (A) Arithmetic mean  $\leq$  Median  $\leq$  Mode
- (B) Arithmetic mean  $\geq$  Median  $\geq$  Mode
- (C) Arithmetic mean = Median = Mode
- (D) None of the above

44. Find the mode for the following distribution :

Class-Interval	Frequency
0–10	5
10–20	8
20–30	7
30–40	12
40–50	28
50–60	20
60–70	10
70–80	10

- (A) 45
- (B) 40
- (C) 32
- (D) 46.67

45. The relation among Mean, Median and

Mode is :

- (A) Mode = 3 Median – 2 Mean
- (B) Mode = 2 Median – 3 Mean
- (C) Mode = 3 Median + 2 Mean
- (D) Mode = 2 Median + 3 Mean

46. The arithmetic mean of 3 sets are 25,

10 and 15, whose corresponding number of observations are 200, 250 and 300. The combined arithmetic mean is :

- (A) 20
- (B) 18
- (C) 16
- (D) 11

47. Find the median for the following distribution :

Wages in ₹	No. of Workers
0–10	22
10–20	38
20–30	46
30–40	35
40–50	20

- (A) 24.57  
 (B) 25  
 (C) 23  
 (D) 26
48. According to the census of 1981 the following are the population figures (in thousand) of 10 cities :
- 2000, 1180, 1785, 1500, 560, 782, 1200, 385, 1123, 222
- Find the median.
- (A) 1251  
 (B) 1151.1  
 (C) 1310  
 (D) 1500

49. Show that the arithmetic mean of the series  $1, 2, 2^2, 2^3, \dots, 2^n$  is :

(A)  $\frac{3^{n+1} - 1}{n + 1}$

(B)  $\frac{2^{n+1} - 1}{n + 1}$

(C)  $\frac{4^n - 1}{n + 1}$

(D)  $\frac{3^n + 1}{n + 1}$

50. The monthly income of 9 persons is as given below in ₹ : 450, 350, 650, 400, 430, 700, 400, 750, 520.

Calculate the mean.

(A) 516.7

(B) 500

(C) 410

(D) 390

51. The first step in hypothesis testing is :
- (A) Remove data
  - (B) Form hypothesis
  - (C) Conclusion
  - (D) None of the above
52. Sampling reduces :
- (A) Cost
  - (B) Data
  - (C) Error
  - (D) All of the above
53. Stratified sampling means :
- (A) No division
  - (B) Division into groups
  - (C) Random
  - (D) All of the above
54. Sampling helps to :
- (A) Save time and cost
  - (B) Increase error
  - (C) Destroy data
  - (D) None of the above
55. Which test is used for difference of means ?
- (A) *t*-test
  - (B) Chi-square
  - (C) Mode
  - (D) Median
56. Standard error of mean formula includes :
- (A) Mean
  - (B) Standard deviation
  - (C) Mode
  - (D) Median

57. Systematic sampling means :

- (A) Random
- (B) Fixed interval selection
- (C) Biased
- (D) None of the above

58. Hypothesis testing is used to :

- (A) Prove theory
- (B) Make decisions
- (C) Draw graphs
- (D) None of the above

59. Hypothesis is :

- (A) Fact
- (B) Assumption
- (C) Law
- (D) Rule

60. Null hypothesis is denoted by :

- (A)  $H_0$
- (B)  $H_1$
- (C)  $H_2$
- (D) H

61. Alternative hypothesis is :

- (A) Same as  $H_0$
- (B) Opposite of  $H_0$
- (C) Random
- (D) None of the above

62. Level of significance is denoted by :

- (A)  $\alpha$
- (B)  $\beta$
- (C)  $\gamma$
- (D)  $\delta$

63. Type-1 error is :

- (A) Accepting true  $H_0$
- (B) Rejecting true  $H_0$
- (C) Accepting false  $H_0$
- (D) None of the above

64. Bias in sampling means :

- (A) Fair selection
- (B) Unfair selection
- (C) Random
- (D) None of the above

65. Sampling frame is :

- (A) List of population
- (B) Sample
- (C) Graph
- (D) None of the above

66. Chi-square test is used for :

- (A) Mean
- (B) Goodness of fit
- (C) Median
- (D) Mode

67. Z-test is used for :

- (A) Small sample
- (B) Large sample
- (C) No data
- (D) None of the above

68.  $t$ -test is used when :

- (A) Large sample
- (B) Small sample
- (C) No sample
- (D) Infinite sample

69. Standard error is :

- (A) Error in mean
- (B) Standard deviation sample
- (C) Standard deviation sampling distribution
- (D) None of the above

70. Reliability of a sample depends on :

- (A) Sample size
- (B) Color of data
- (C) Shape
- (D) None of the above

71. Non-sampling error includes :

- (A) Measurement error
- (B) Random error
- (C) Sampling bias
- (D) None of the above

72. Sampling error arises due to :

- (A) Wrong calculation
- (B) Selecting a part instead of whole
- (C) Machine error
- (D) None of the above

73. Which is a probability sampling method ?

- (A) Judgment of sampling
- (B) Convenience sampling
- (C) Random sampling
- (D) Data sampling

74. Census method means :

- (A) Study of sample
- (B) Study of full population
- (C) Radom selection
- (D) None of the above

75. What is sampling ?

- (A) Study of whole population
- (B) Study of a part of population
- (C) Only theoretical study
- (D) None of the above

76. In the usual notations  $R_{1.23}^2$  can be expressed as :

- (A)  $R_{1.23}^2 = 1 - (1 - r_{12}^2)(1 - r_{13.2}^2)$
- (B)  $R_{1.23}^2 = 1 - (1 - r_{12}^2)(1 - r_{13.2})$
- (C)  $R_{1.23}^2 = (1 - r_{12}^2)(1 - r_{13.2}^2)$
- (D)  $R_{1.23}^2 = (1 - r_{12})(1 - r_{13.2})$

77. If the usual notations  $R_{1.23}^2$  is equal to :

- (A)  $\frac{(r_{12}^2 + r_{13}^2 - 2r_{12}r_{13}r_{23})}{(1 - r_{23}^2)}$
- (B)  $\frac{(r_{12}^2 + r_{13}^2 - 2r_{12}r_{13})}{(1 - r_{23}^2)}$
- (C)  $\frac{(r_{12}^2 + r_{13}^2 - 2r_{23})}{(1 - r_{23}^2)}$
- (D)  $\frac{(r_{12}^2 + r_{13}^2 - r_{12}r_{13}r_{23})}{(1 - 2r_{23})}$

78. In a tri-variate distribution  $X_1, X_2$  and  $X_3$ , if all the total correlation coefficients are equal, say  $\rho$ , then while the multiple correlation coefficient is never less than the total correlation coefficients  $1 - R_{1.23}^2$  is equal to :

- (A)  $\frac{(1 - \rho)(1 + 2\rho)}{(1 + \rho)}$
- (B)  $\frac{(1 + \rho) - (1 - \rho)(1 + 2\rho)}{(1 + \rho)}$
- (C)  $\frac{(1 + \rho)(1 - 2\rho)}{(1 + \rho)}$
- (D)  $\frac{(1 + \rho)(1 - 2\rho)}{(1 - \rho)}$

79. In the usual notations  $r_{12.3}$  is equal to :

(A) 
$$\frac{r_{12} - r_{13} \cdot r_{23}}{\sqrt{1 - r_{13}^2} \sqrt{1 - r_{23}^2}}$$

(B) 
$$\frac{r_{12}^2 - r_{12} \cdot r_{23}}{\sqrt{1 - r_{13}^2} \sqrt{1 - r_{23}^2}}$$

(C) 
$$\frac{r_{13} \cdot r_{23} - r_{12}^2}{\sqrt{1 - r_{13}^2} \sqrt{1 - r_{23}^2}}$$

(D) 
$$\frac{r_{13} \cdot r_{23} - r_{12}}{\sqrt{1 - r_{13}^2} \sqrt{1 - r_{23}^2}}$$

80. Let there be  $n$  observations on  $X_1, X_2$  and  $X_3$  in a trivariate distribution. In the usual notations if  $r_{12.3} = 0$ , then we can say that :

(A)  $X_1$  and  $X_2$  may be uncorrelated when the effect of  $X_3$  is eliminated

(B)  $X_1$  and  $X_2$  may appear to be correlated because of the effect of  $X_3$

(C)  $r_{12}$  will not be zero if  $X_3$  is correlated with both  $X_1$  and  $X_2$

(D) All the above statements are false

81. If plot of  $X$  and  $Y$  is a curve such that no ordinate cuts it more than once, then, for  $\eta_{YX}$  to be correlation ratio of  $Y$  on  $X$  and  $\eta_{XY}$  to be the correlation ratio of  $X$  on  $Y$  :

(A)  $\eta_{YX} = 1$

(B)  $\eta_{YX} = -1$

(C)  $\eta_{XY} = 1$

(D)  $\eta_{YX} = 0$

82. Let  $\rho$  the correlation coefficient between  $X$  and  $Y$ ,  $\eta_{YX}$  be correlation ratio of  $Y$  on  $X$  and  $\eta_{XY}$  be the correlation ratio of  $X$  on  $Y$ . If the plot of  $X$  and  $Y$  lies on a curve such that no ordinate cuts it more than once and the plot is symmetrical about  $Y$  axes, then :

(A)  $\rho = 0, \eta_{XY} = 0, \eta_{YX} = 0$

(B)  $\rho = 0, \eta_{XY} = 0, \eta_{YX} = 1$

(C)  $\rho = 0, \eta_{XY} = 1, \eta_{YX} = 0$

(D)  $\rho = 0, \eta_{XY} = 1, \eta_{YX} = 1$

83. Let  $\eta_{YX}$  be the correlation ratio of Y on X. Then while the absolute value of the correlation ratio can never be less than the absolute value of the correlation coefficient then  $\eta_{YX}^2$  :

- (A) like correlation coefficient is independent of origin and scale
- (B) like regression coefficient, is independent of origin and scale
- (C) is independent of scale measurement and not of origin
- (D) is neither independent of origin nor scale

84. If  $e_i = y_i - Y_i$  is the error in the  $i$ th estimate for a linear regression Y on X for  $n$  pairs of  $(x_i, y_i)$ 's, then the standard error of estimate of Y is :

- (A)  $\sigma_y \sqrt{1-r^2}$
- (B)  $\sigma_y$
- (C)  $\sigma_y \sqrt{1-2r^2}$
- (D) None of the above

85. The tangent of the angle between two regression lines is given as 0.6 and the S.D. of Y is known to be twice that of X. Then the value of correlation coefficient between X and Y is :

- (A)  $-\frac{1}{2}$
- (B)  $\frac{1}{2}$
- (C) 0.7
- (D) 0.3

86. The two lines of regression are given as  $X + 2Y - 5 = 0$  and  $2X + 3Y = 8$ . Then the mean values of X and Y respectively are :

- (A) 2, 1
- (B) 1, 2
- (C) 2, 5
- (D) 2, 3

87. When the correlation coefficient  $r = \pm 1$ , then the two regression lines :
- (A) are perpendicular to each other  
 (B) coincide  
 (C) are parallel to each other  
 (D) do not exist
88. If one regression coefficient is greater than unity, then the other must be :
- (A) Greater than the first one  
 (B) Equal to unity  
 (C) Less than unity  
 (D) Equal to zero
89. The farther the two regression lines cut each other :
- (A) The greater will be the degree of correlation  
 (B) The lesser will be the degree of correlation  
 (C) Does not matter  
 (D) None of the above
90. The regression coefficients are  $b_2$  and  $b_1$ . Then the correlation coefficient  $r$  is :
- (A)  $\frac{b_1}{b_2}$   
 (B)  $\frac{b_2}{b_1}$   
 (C)  $b_1b_2$   
 (D)  $\pm\sqrt{b_1b_2}$
91. The regression line of Y on X minimizes :
- (A) Total of the squares of horizontal deviations  
 (B) Total of the squares of the vertical deviations  
 (C) Both vertical and horizontal deviations  
 (D) None of the above

92. If  $X_1, X_2, X_3, \dots, X_n$  are  $n$  uncorrelated random variables following the same distribution, then the correlation between  $\bar{X}$  and  $X_i - \bar{X}$  will be :

- (A) 0
- (B) 1
- (C)  $\frac{1}{2}$
- (D) None of the above

93. Let  $X$  be normally distributed with mean 0 and variance  $\sigma_1^2$  and  $Y$  be normally distributed with mean 0 and variance  $\sigma_2^2$ . Let  $\rho$  be the correlation coefficient between  $X$  and  $Y$ . Then

$$\left(\frac{X}{\sigma_1}\right) + \left(\frac{Y}{\sigma_2}\right) \text{ and } \left(\frac{X}{\sigma_1}\right) - \left(\frac{Y}{\sigma_2}\right):$$

- (A) have correlation coefficient =  $\rho$
- (B) have correlation coefficient  $\leq \rho$
- (C) have correlation coefficient  $\geq \rho$
- (D) None of the above

94.  $X, Y$  and  $Z$  are three uncorrelated variables having variances  $\sigma_x^2, \sigma_y^2$  and  $\sigma_z^2$  respectively, then the correlation coefficient between  $X + Y$  and  $Y + Z$  is :

- (A) 0
- (B)  $\frac{1}{2}$
- (C) 1
- (D) None of the above

95. The coefficient of correlation is independent of :

- (A) Change of scale only
- (B) Change of origin only
- (C) Both change of scale and origin
- (D) Neither change of scale nor change of origin

96. The coefficient of correlation between X and Y is 0.6. Their covariance is 4.8. The variance of X is 9. Then the S.D. of Y is :

(A)  $\frac{4.8}{3 \times 0.6}$

(B)  $\frac{0.6}{4.8 \times 3}$

(C)  $\frac{3}{4.8 \times 0.6}$

(D)  $\frac{4.8}{9 \times 0.6}$

97. Probable error of  $r$  is :

(A)  $0.6745 \cdot \frac{1-r^2}{\sqrt{n}}$

(B)  $0.6754 \cdot \frac{1+r^2}{\sqrt{n}}$

(C)  $0.6547 \cdot \frac{1-r^2}{n}$

(D)  $0.6754 \cdot \frac{1-r^2}{n}$

98. The coefficient of correlation :

(A) cannot be positive

(B) cannot be negative

(C) is always positive

(D) can be both positive as well as negative

99. The coefficient of correlation :

(A) can take any value between -1 and + 1

(B) is always less than - 1

(C) is always more than + 1

(D) cannot be zero

100. The coefficient of correlation will have positive sign when :

(A) X is increasing and Y is decreasing

(B) Both X and Y are increasing

(C) X is decreasing and Y is increasing

(D) There is no change in X and Y

***(Only for Rough Work)***

4. Four alternative answers are mentioned for each question as—A, B, C & D in the booklet. The candidate has to choose the correct answer and mark the same in the OMR Answer-Sheet as per the direction :

**Example :**

**Question :**

- Q. 1 (A) ● (C) (D)  
 Q. 2 (A) (B) ● (D)  
 Q. 3 (A) ● (C) (D)

Illegible answers with cutting and over-writing or half filled circle will be cancelled.

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.
6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.
7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.
8. After the completion of the examination candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.
9. There will be no negative marking.
10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.
11. To bring and use of log-book, calculator, pager and cellular phone in examination hall is prohibited.
12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

**Impt. :** On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर—A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छँटना है। उत्तर को OMR आन्सर-शीट में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

**उदाहरण :**

**प्रश्न :**

- प्रश्न 1 (A) ● (C) (D)  
 प्रश्न 2 (A) (B) ● (D)  
 प्रश्न 3 (A) ● (C) (D)

अपठनीय उत्तर या ऐसे उत्तर जिन्हें काटा या बदला गया है, या गोले में आधा भरकर दिया गया, उन्हें निरस्त कर दिया जाएगा।

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
6. सभी उत्तर केवल ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
7. ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।
8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।
9. निगेटिव मार्किंग नहीं है।
10. कोई भी रफ कार्य, प्रश्न-पुस्तिका के अन्त में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
11. परीक्षा-कक्ष में लॉग-बुक, कैलकुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।
12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

**महत्वपूर्ण :** प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्न-पुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्न-पुस्तिका प्राप्त कर लें।