



(in Words)

Superintendent Seal & Signature

FIC. No (For office use only)

111601

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STATISTICS - I

Max: Marks: 85

Total Time: 3 Hours

Note: There are THREE Sections of this Paper i.e. A, B and C, attempt each according to the given instructions.

Time: 20 Minutes

SECTION-A

Marks: 18

Note: Attempt all parts of Section - A. Section -A must be return to the superintendent after 20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc is prohibited in Section-A and no credit will be given to such answer.

I. Write the correct option i.e. A/B/C/D in the empty boxes.

i. Class mark of 11-15 is _____
(A) 5 (B) -4 (C) 13 (D) None of these

ii. $\sum_{i=1}^n (x-a) = 0$ if a is equal to _____
(A) AM (B) Constant (C) Zero (D) GM

iii. The A.M of 2, 2, 2, 2, 2 is _____
(A) 1 (B) 0 (C) a (D) None of these

iv. When three coins are tossed sample points are _____
(A) 3 (B) 8 (C) 6 (D) 9

v. The Geometric means 0,1,4,16 is _____
(A) 1 (B) 5 (C) 4 (D) 0

vi. For the construction of frequency polygon we take _____ on y-axis.
(A) Class boundaries (B) Class limits (C) Lower limit (D) Cumulative frequencies

vii. When the two events A & B are mutually exclusive, then $P(A \cap B) =$ _____
(A) 0 (B) 1 (C) -1 (D) Some positive value

viii. The second means moments are equal to _____
(A) Variance (B) 2 (C) Mean (D) Zero

ix. The index number for the base period is always _____
(A) 0 (B) 1 (C) 10 (D) 100

x. C.V is zero when _____ zero.
(A) Mean (B) S.D (C) Median (D) Mode

xi. In binomial distribution if p is equal to 0.5 then q is equal to _____
(A) 1 (B) 0 (C) 0.5 (D) 0.6

xii. When $\beta=3$ then distribution is _____
(A) Meso Kurtic (B) Play Kurtic (C) Lepto Kurtic (D)None of these

xiii. $E(x+a) =$ _____
(A) 1 (B) $E(x) + a$ (C) $aE(x)$ (D) a

xiv. In uniform distribution each value of x has _____
(A) Equal probability (B) 0.5 (C) 0 (D) 1

xv. The probability of any event is between _____
-1 and +1 (B) 0 and 1 (C) 1 and 2 (D) -1 and 2

xvi. The probability of any event lies between _____
(A) -1 + 1 (B) 0, 1 (C) 1, 2 (D) None of these

xvii. Fisher index number is _____ of Laspcyre & Paasche index no.
(A) A.M (B) GM (C) Median (D) Mode

xviii. The first moment about mean is equal _____
(A) A.M (B) GM (C) Variance (D) None of these

STATISTICS - I

Note: Time allowed for section B and C is 2 hours and 40 minutes.

Marks: 40

SECTION "B"

II. Attempt any TEN Parts out of the following. Each Part carries equal marks.

- i. What is different method for collection secondary data?
- ii. Differentiate Parameter & Statistics with examples.
- iii. What is Cumulative frequency curve?
- iv. What are the characteristics of good average?
- v. Distinguish between Mean and Median?
- vi. If a,b are any two number then show that $A.M > G.M > H.M$.
- vii. Show that: $\sum_{i=1}^n (x_i - \bar{x}) = 0$
- viii. The 1st four mean moments of a data are 0, 4, 8 & 44. Find its moment's ratio.
- ix. Prove that: $\sum_{i=1}^n (x_i - \bar{x}) < \sum_{i=1}^n (x_i - a)^2$
- x. What is meant by Sample space? Give examples.
- xi. How many distinct permutations can be made of the word "STATISTICS".
- xii. Define independent & dependent events. Give examples.
- xiii. Define any two of the following.
 - (a) Mutually exclusive events. (b) Exhaustive events. (c) Equal likely events

SECTION "C"

Marks: 27

Note: Attempt any THREE questions of the following. Each question carries equal Marks.

III. Draw the Histogram & frequency polygon for the following data:

Classes:	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
Frequency:	3	7	10	18	19	14	10	8

IV. Compute the Median & Mode for the data given below.

X :	5	8	10	13	18	22	28	30
F :	4	6	9	10	10	8	6	3

V. Calculate the coefficient of variation for the data given below.

Height of person	30	55	84	100	125	150	175
No. of person	100	105	150	115	101	90	88

III. Compute chain indices using the simple average method for the following data:

Year	Price Commodity I	Price Commodity II	Price Commodity III	Price Commodity IV
2008	13	34	43	45
2009	14	38	45	56
2010	17	40	48	60
2011	19	45	50	60
2012	25	50	55	65