Serial No. of Answer Book	MRD-E/XI (A)	Roll Number
_____	**Statistics Part-I** **Paper-I**	_____

Fic. No. _____

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Fic. No. _____

Statistics Part-I (Paper-I)

SECTION "A"

Time: 20 Min   Marks: 15

NOTE:Use this sheet for this section. No marks will be awarded for cutting, erasing or overwriting.

Q1.Choose the correct answer from the given choices i.e. (a, b, c, d) and insert into the relevant box.

(i).   Height of an individual is _____ variable.

(A) Discrete   (B) Continuous   (C) Qualitative   (D) None of these

(ii)   Data collected in first hand is called _____data.

(A) Primary   (B) Secondary (C) Frequency (D) None of these.

(iii).   If x= 3 , 3 , 0 , 6 then _____ cannot be calculated.

(A) Mean   (B) Median   (C) Mode   (D) G.M

(iv).   Graph of Adjacent rectangles is called _____.

(A) Historigram   (B) Freq:Polygon   (C) Histogram   (D) Ogive

(v).   Variance of 2 , 2 , 2 , 2 is _____.

(A) Zero   (B) 2   (C) $\sqrt{2}$ (D) 1

(vi).   The second moment about mean is equal to _____.

(A) Mean   (B) Variance   (C) S.D   (D) All three

(vii).   The ideal index number is the _____ index number.

(A) Laspeyre   (B) Paasche (C) Fisher   (D) None of these

(viii). $\dfrac{\sum P_n}{\sum P_o} \times 100$ is called _____.

(A)Price Relative (B)Simple Ave: Of Relative (C)Value Index (D)Simple Aggregative.

(ix).   Index number for the base period will always be _____.

(A) 100   (B) 1   (C) Zero   (D) 200

(x).   Probability of a sure event will always be equal to _____.

(a) One   (B) Zero   (C) +2   (D) None of these

(xi).   Prob^y: of a king from a pack of 52 cards is _____.

(A) $\dfrac{4}{13}$ (B) $\dfrac{1}{4}$ (C) $\dfrac{4}{52}$ (D) $\dfrac{1}{52}$

(xii).   For any two random variables E(x-y) = _____.

(A) E(x)+E(y)   (B) E(x) $\pm$ E(y)   (C) E(x $\pm$ y)   (D) E(x)-E(y)

(xiii). The binomial Prob^y:dist^n: has _____ Parameters.

(A) Two   (B) Three   (C) Four   (D) One

(xiv).   SD (ax+b) = _____.

(A) a^2 S.D(x)   (B) a S.D(x)(C) a S.D(x)+b   (D) None of these

(xv).   In sampling with out replacement, the events are called _____.

(A) Dependent   (B) Independent   (C) M.E   (d) None of these

Statistics Part-I

Paper-I

Time: Allowed: 2.40h   Max. Marks: 60

SECTION "B"   Marks: 36

Q2. Attempt any Nine questions. Each question carries 4 marks.

(i)   Differentiate between Primary and Secondary data.

(ii)   If $\overline{X}$ =87 and median = 90. Find mode

(iii)   Write down the properties of Arithmatic mean.

(iv)   Define Dispersion and name the methods of measuring dispersion.

(v)   If mean =10 and m_2=16. Find C.V.

(vi)   Two dice are rolled. Find the Prob[y]: that sum of dots is at least 8.

(vii)   Laspeyre's price index number =254.17 and fisher price index number =252.37.
         Find Paasche's price index number.

(viii) Explain the fixed and chain base methods for index number construction.

(ix)   State and prove addition law of Prob[y]: for mutually exclusive events.

(x)   How many permutations of the letters of the word "HYPERBOLA" be made.

(xi)   If E(x)=3, then find E(2x-1) , E(x+1)

(xii)   Find "K" for the Prob[y]: dist[n], given below and find E(x)

x	0	1	2	3
f(x)	1/8	K	3/8	1/8

SECTION "C"   Marks: 24

Note: Attempt any THREE questions. Each question carries 10 marks.

Q3.   Find mean deviation and standard deviation for the data given below.

Classes	20-24	25-29	30-34	35-39	40-44	45-49
f	2	8	15	10	3	2

Q4.   Compute Marshal-Edgeworth and Fisher Price index numbers from the
         following data.

Items	Base Year		Current Year	
	Price	**Quantity**	**Price**	**Quantity**
A	4	50	10	60
B	4	35	8	40
C	3	10	6	20
D	2	5	4	20

Q5.   Find complete binomial dist[n] : for n=4 and p=$\frac{1}{2}$

Q6.   Find mean and median of the following

Marks	30-39	40-49	50-59	60-69	70-79	80-89
f	3	5	9	6	3	1