FBD-11-19

Roll No. : [redacted]

Objective
Paper Code
6187

Intermediate Part First (New Scheme)
STATISTICS (Objective)
Time: 20 Minutes Marks: 17

Q.No.1 **You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.**

S.#	Questions	A	B	C	D
1	The variance of 7, 7, 7, 7, 7, is:	7	$(7)^2$	0	– 7
2	Mean deviation from median is:	Least	Most	Equal	None of these
3	Measures of dispersion has _____ types.	2	3	4	5
4	If a = 90 , $\sum d = 2$ and n = 10, then $\bar{x}$ is:	90.10	90.15	90.20	90.25
5	G.M. of numbers 0, 1, 2, 5, 9 is:	2	9	0	1
6	Sum of deviations of the values from mean is always:	Negative	Positive	Zero	Fractional
7	The process of arranging data into rows and columns is called:	Presentation	Tabulation	Classification	Arranging of data
8	There are bases for classification:	2	3	4	5
9	Primary data and secondary data are:	Same	Different	Opposite	None of these
10	Hypergeometric distribution has parameters:	Two	Three	Four	Five
11	The probability of success is denoted by:	1 + p	q	p	1 – p
12	000 – 999 are called random numbers of:	1-digit	2-digits	3-digits	4-digits
13	E(XY) is equal to:	E (X) + E(Y)	XE(Y)	E (X) · E(Y)	YE(X)
14	Any subset of the sample space is called:	Event	Sample	Outcome	Point
15	The probability of sure event is:	0	< 1	1	> 1
16	In chain base method, base period is:	Fixed	Changed	Constant	None of these
17	If all the values are of equal importance then index numbers are called:	Simple	Weighted	Unweighted	None of these

FBD-11-19

Intermediate Part First (New Scheme) Roll No. _____

STATISTICS (Subjective)

Time: 02:40 Hours Marks: 68

SECTION – I

2. **Write short answers of any EIGHT parts.** 16

(i) Define discrete variable

(ii) Expand $\sum_{i=5}^{8}(y_i - \mu)$ and $\pi_{i=1}^{3}(y_i)$

(iii) Define weighted arithmetic mean.

(iv) If $\bar{y}_1 = 3$ with $n_1 = 3$ and $\bar{y}_2 = 4$ with $n_2 = 2$, then find $\bar{y}_c$

(v) What are merits of mode?

(vi) What are demerits of geometric mean?

(vii) Illustrate graphically the relative positions of the mean, median and mode for frequency curves which are skewed to right and left.

(viii) Define price relatives.

(ix) Define simple index number.

(x) What is consumer price index number?

(xi) Find Fisher's index number if Laspeyer's = 108.78 and Paasche's = 109.21

(xii) What are limitations of an index number?

3. **Write short answers of any EIGHT parts.** 16

(i) What is classification?

(ii) Define class boundaries.

(iii) What is meant by dispersion?

(iv) Define standard deviation.

(v) Write any two properties of standard deviation.

(vi) Compute coefficient of quartile deviation if $Q_1 = 10.20$, $Q_3 = 58.29$

(vii) Calculate lower quartile from the given data:- 13, 3, 7, 15, 17, 5, 23, 27

(viii) Define event.

(ix) Define compound event.

(x) Define non-mutually exclusive events.

(xi) Define exhaustive events.

(xii) For two mutually exclusive events A and B if $P(A) = 0.25$, $P(B) = 0.40$, then find $P(A \cup B)$.

4. **Write short answers of any SIX parts.** 12

(i) What do you understand by random numbers?

(ii) Define mathematical expectations.

(iii) Given $E(X) = 200$, $C.V(X) = 7$, then find $Var(X)$.

(iv) What is continuous random variable?

(v) Write any two properties of expectation.

(vi) What is Bernoulli's trial?

(vii) Find the number of trials of a binomial distribution which has mean = 12 , S.D = 2

(viii) Under which circumstances we can apply the binomial distribution and hypergeometric distribution?

(ix) Given $N = 10$, $n = 4$ and $K = 5$. Find $P(X = 1)$.

SECTION – II Attempt any THREE questions. Each question carries 08 marks.

5. (a) Find the weighted mean if weights 4, 3, 3, 2 and 2 respectively are allotted to the subjects: 04

Subjects	Urdu	English	Math	Statistics	Physics
Marks	82	73	80	57	62

(b) Calculate harmonic mean from the following distribution: 04

Classes	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Frequency	3	5	12	6	4

6. (a) Find the coefficient of quartile deviation from the following data: 04

Classes	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Frequency	3	7	10	8	2

(b) The first three moments of a distribution about the value 2 of a variable are 1, 16 and – 40. Show that the mean is 3, the variance is 15 and third moment about mean is – 86. 04

(Continued P/2)