Version No.				
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ROLL NUMBER					

BUSINESS STATISTICS
HSSC–II
SECTION – A (Marks 10)

Time allowed: 15 Minutes

Section – A is compulsory. All parts of this section are to be answered on this page and handed over to the Centre Superintendent. Deleting/overwriting is not allowed.

Do not use lead pencil.

حصہ اوّل لازمی ہے۔ اس کے جوابات اسی صفحہ پر دے کر تاخیر مرکز کے حوالے کریں۔ کاٹ کر دوبارہ لکھنے کی اجازت نہیں ہے۔ لیڈ پنسل کا استعمال ممنوع ہے۔

Answer Sheet No. _____

ہر سوال کے سامنے دیے گئے، کریکولم کے مطابق درست دائرہ کو پُر کریں۔ **Invigilator Sign.** _____

Fill the relevant bubble against each question according to curriculum: **Candidate Sign.** _____

	Question	A	B	C	D	A	B	C	D
	A small representative part of population is called:	Sample	Parameter	Population	Primary data	○	○	○	○
	A variable that assumes any value within a range is called:	Discrete variable	Continuous variable	Independent variable	Dependent variable	○	○	○	○
	Printed data are always:	Confidential data	Private data	Secondary data	Primary data	○	○	○	○
	The number 4.60001 rounded off to nearest unit (whole number) is:	4	4.01	4.6	5	○	○	○	○
	Mode of the series 2, 2, 2, 3, 3, 3, 2, 3, 3, 4, 5 is:	3	4	5	2	○	○	○	○
	We must arrange data before calculating:	Mean	Median	Mode	Geometric Mean	○	○	○	○
	The mean of 10 observations is 10. All observations are increased by 10%. The mean of the increased observations shall be:	10	1.1	11	10.1	○	○	○	○
	If Paasche's price index =74.76 and Fisher's price index =75.76, then Laspeyre's price index number is:	76.78	76.75	76.76	76.77	○	○	○	○
	If all the values are of equal importance, the index numbers are:	Weighted	Unweighted	Composite	Value Index	○	○	○	○
	When two dice are rolled then total number of possible outcomes will be:	6	12	36	2	○	○	○	○

BUSINESS STATISTICS HSSC–II

Time allowed: 2:15 Hours **Total Marks Sections B and C: 40**

NOTE: Answer any eight parts from Section 'B' and any two questions from Section 'C' on the separately provided answer book. Write your answers neatly and legibly.

SECTION – B (Marks 24)

Q. 2 Write brief answers of any EIGHT parts. **(8 x 3 = 24)**

(i) Distinguish between variable and constant.

(ii) Give the importance of Statistics in Education.

(iii) Differentiate between grouped data and ungrouped data.

(iv) Find $\left[\sum f(X-4)\right]^2$ given $X=3, 4, 5, 8$ and $f=2, 1, 2, 2$

(v) If sum of 15 values is 300 and by addition of two more values, it becomes 360. Find the new values if the ratio between them is 1 : 4.

(vi) Deviations from 10.5 of ten items are: $-1.3, 2.0, 2.9, 7.5, -4.6, -3.4, 8.2, 9.3, -7.4, 5.6$. Calculate the arithmetic mean.

(vii) Give $f_m=33$, $f_1=26$, $f_2=23$, $h=10$, $l=40.5$. Find mode.

(viii) If the mode and mean of a moderately asymmetrical series are 16 and 20.2 respectively, compute the value of median.

(ix) Compute Fisher's price index number for the given data: $\sum p_o q_o = 35310$, $\sum p_1 q_o = 41140$, $\sum p_1 q_1 = 46707$ and $\sum p_o q_1 = 39644$.

(x) If $W=20, 25, 30, 40,$ & $I=100, 105, 110, 120$. Find weighted average of relative's index No.

(xi) Solve: a. ${}^{14}P_{11}$ b. ${}^{20}C_5$

SECTION – C (Marks 16)

Note: Attempt any TWO questions. All questions carry equal marks. **(2 x 8 = 16)**

Q. 3 Calculate Mean, Median and Mode from the following frequency distribution: **(08)**

Class Limits	3.0 – 3.9	4.0 – 4.9	5.0 – 5.9	6.0 – 6.9	7.0 – 7.9	8.0 – 8.9
Frequency	13	27	40	30	16	4

Q. 4 Compute index numbers of prices from the following data taking 1981 as base using median as an average: **(08)**

Year	**Price**		
	A	**B**	**C**
1981	18	85	52
1982	22	76	60
1983	28	80	66
1984	31	95	80

Q. 5 Find the probability for each of the following: **(08)**

(i) An even number appears in a single toss of fair die.

(ii) The sum of 5 appears in a single toss of a pair of fair dice.

(iii) A queen, ace, jack of spades or King of diamonds appears in drawing a single card from a well-shuffled ordinary deck of 52 cards.

(iv) Of getting a number less than 7, if a die is rolled one time.