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Answer Sheet No. \_\_\_\_\_

Sig. of Candidate. \_\_\_\_\_

Sig. of Invigilator. \_\_\_\_\_

# BUSINESS STATISTICS HSSC-II

## SECTION – A (Marks 10)

**Time allowed: 15 Minutes**

**NOTE:** Section-A is compulsory. All parts of this section are to be answered on the question paper itself. It should be completed in the first 15 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

**Q. 1** Circle the correct option i.e. A / B / C / D. Each part carries one mark.

- (i) The branch of statistics, which deals with the testing of hypothesis and inferences about population parameter is called:
- A. Descriptive statistics                      B. Inferential statistics  
C. Statistical inference                      D. Statistics
- (ii) A small representative part of population is called:
- A. Primary data                      B. Secondary data  
C. Sample                      D. Parameter
- (iii) The cumulative frequency of the last class in less than cumulative frequency distribution is always equal to:
- A.  $\sum f$                       B.  $\sum fx$   
C. 1                      D. 100
- (iv) Total of relative frequencies is:
- A. 0                      B. 1  
C. 10                      D. 360
- (v) If the arithmetic mean of 20 values is 10 then  $\sum x$  is equal to:
- A. 10                      B. 20  
C. 200                      D. 30
- (vi) If  $Y = 100 - 25x$  and  $\bar{x} = 3$  then  $\bar{y} = ?$
- A. 100                      B. 25  
C. 75                      D. 0
- (vii) When price of a year is divided by the price of the preceding year, price we get:
- A. Value Index                      B. Link relative  
C. Simple Index                      D. Volume Index
- (viii) If all the values are not of equal importance, the index number is called:
- A. Simple index number                      B. composite index number  
C. Unweighted index number                      D. Weighted index number
- (ix) If A and B are independent event,  $P(B) = 0.4$  and  $P(A \cap B) = 0.36$  then  $P(A) = ?$
- A. 0.6                      B. 1  
C. 0.9                      D. 0
- (x) The probability of an event lies between:
- A. -1 and +1                      B. -1 and 0  
C. 0 and +1                      D. 0 and  $\infty$

**For Examiner's use only:**

Total Marks:

10

Marks Obtained:

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# 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. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

## SECTION - B (Marks 24)

**Q. 2** Attempt any EIGHT parts. The answer to each part should not exceed 3 to 4 lines. (8 x 3 = 24)

- (i) Define discrete variable and continuous variable.
- (ii) What is difference between primary and secondary data?
- (iii) Define classification and Tabulation.
- (iv) Define Statistic and parameter.
- (v) The reciprocals of the values of the variable  $x$  are 0.0500, 0.0400, 0.0200, 0.0285, 0.0143. Find  $\bar{x}$ .
- (vi) Given  $\sum(x - 10) = 2.8$ ,  $n = 5$  find  $\bar{x}$ .
- (vii) Average weight of 10 students is 60 kg and average weight of 15 students is 64 kg. Find average weight of all 25 students.
- (viii) Define simple and composite index numbers.
- (ix) Find index numbers from the following data by taking 1972 as base year:  
Year            1970    1971    1972    1973    1974  
Prices           9        6        8        11       10
- (x) A card is selected from a deck of 52 playing cards. What is the probability that the card is red or black.
- (xi) Define permutation and combination.

## SECTION - C (Marks 16)

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

**Q. 3** Find mean, median and mode for the following frequency distribution:

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
f	13	27	40	30	16	4

**Q. 4** From the following data, find index number for 2002 on the basis of 2001 by:

- a. Laspeyre's formula
- b. Paasche's formula
- c. Show that Fisher ideal index is square root of the product of Laspeyre's and Paasche's index:

Items	2001		2002	
	Price	Quantity	Price	Quantity
A	64	270	75	290
B	40	124	45	144
C	18	130	21	137
D	58	185	68	200

**Q. 5** A pair of dice is rolled. Find the probability that:

- a. Sum of faces is 7
- b. Both faces are same
- c. Sum of faces is greater than 9