2019

(6th Semester)

COMMERCE

Paper : BC–603

(Business Statistics)

Full Marks : 70   Pass Marks : 45%

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 45)

The figures in the margin indicate full marks for the questions

1. *(a)* What is secondary data? Discuss the advantages and disadvantages of secondary data.   2+7=9

Or

   (b) What do you mean by classification of data? Also discuss the various types of classification done in statistics.   2+7=9

2. *(a)* Calculate the mode from the following data :   9

CI :	30–40	40–50	50–60	60–70	70–80	80–90	90–100
f :	6	10	16	14	10	5	2

(Turn Over)

Or

(b) A company wanted to assess the impact of expenditure (X) on annual profit (Y). The table given below for last 6 years :

X : 5 10 12 13 20 18

Y : 20 25 30 40 60 47

Calculate the regression line of Y on X and estimate the profit for an expenditure of ₹ 30 crore.

3. (a) From the following data of wholesale prices of wheat for the 7 years, construct the index number (i) taking 1964 as base and (ii) by chain base method : 9

Year : 1960 1961 1962 1963 1964 1965 1966

Price of wheat : 30 35 55 40 50 60 65

Or

(b) What do you mean by consumer price index number? Discuss the uses and limitations of consumer price index number. 3+3+3=9

(Continued)

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4. (a) Calculate the seasonal indices from the following table by the ratio to moving averages method : 9

Season	1980	1981	1982	1983	1984
Quarter I	40	42	41	45	44
Quarter II	35	37	35	36	38
Quarter III	38	39	38	36	38
Quarter IV	40	38	42	41	42

Or

(b) What is time series? Discuss the various components of time series. 2+7=9

5. (a) Give a distinction between census method and sample method. 9

Or

(b) In a class, 20% of the students failed in economics, 10% of the students failed in entrepreneurship and 7% failed in both. A student is selected at random. What is the probability that—

(i) the student failed in economics given that he failed in entrepreneurship;

(ii) the student passed either in economics or entrepreneurship?

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(6th Semester)

COMMERCE

Paper : BC–603

(Business Statistics)

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

Answer **all** questions

1. Put a Tick (✓) mark against the correct answer in the brackets provided : 1×10=10

   (a) Population characteristics are called

      (i) parameter ( )

      (ii) statistics ( )

      (iii) variable ( )

      (iv) attributes ( )

(b) The quickest method of collecting primary data is

(i) telephone interview ( )

(ii) direct interview ( )

(iii) mail questionnaire ( )

(iv) schedule sent through enumerator ( )

(c) Coefficient of correlation will always be

(i) more than 0 ( )

(ii) more than –1 ( )

(iii) less than –1 ( )

(iv) between –1 and +1 ( )

(d) Rank correlation method was developed by

(i) Charles E. Spearman ( )

(ii) Karl Pearson ( )

(iii) Charles Babbage ( )

(iv) None of the above ( )

(e) Fisher's ideal index number formula satisfies

(i) time-reversal test ( )

(ii) factor-reversal test ( )

(iii) Both (i) and (ii) ( )

(iv) None of the above ( )

(f) Base year quantities are taken as weight in

(i) Paasche's price index number ( )

(ii) Laspeyre's quantity index number ( )

(iii) Paasche quantity index number ( )

(iv) Laspeyre's price index number ( )

(g) "A time series consists of data arranged chronologically." Who coined the definition?

(i) Morris Hamburg ( )

(ii) Ya-Lun Chou ( )

(iii) Croxton and Lowder ( )

(iv) Levene and Rubin ( )

(h) The probability of getting a king from a pack of 52 cards is

(i) $\frac{1}{169}$ ( )

(ii) $\frac{2}{13}$ ( )

(iii) $\frac{4}{52}$ ( )

(iv) $\frac{4}{26}$ ( )

(i) Convenience sampling is a

(i) probability sampling   ( )

(ii) non-probability sampling   ( )

(iii) random sampling   ( )

(iv) None of the above   ( )

(j) The interval between the base point and the forecast point is termed as

(i) base point   ( )

(ii) forecast point   ( )

(iii) range of forecast   ( )

(iv) None of the above   ( )

2. Indicate whether the following statements are *True* or *False* by putting a Tick (✓) mark in the brackets provided :   1×5=5

(a) Schedule is filled up by informants.

     True ( )   *False* ( )

(b) Scatter diagram helps us to get an idea of the correlation between two variables graphically.

True ( ) False ( )

(c) Probability sampling and random sampling are synonyms.

True ( ) False ( )

(d) In chain base, the base year changes from year-to-year.

True ( ) False ( )

(e) Trend refers to the steady movement over a short period of time.

True ( ) False ( )

3. Write short notes on the following : 2×5=10

(a) Census method

(b) *Univariate data*

(c) Chain index number

(d) Business cycle

(e) Classical method of probability

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