

**Subject Code : Bc/Bs-603**

.....

**To be filled in by the Candidate**

BA / BSc / BCom / BBA / BCA  
6th Semester End Term  
Examination, **2020**

Subject .....

Paper .....

**INSTRUCTIONS TO CANDIDATES**

- 1. The Booklet No. of this script should be quoted in the answer script meant for descriptive type questions and vice versa.**
- 2. This paper should be ANSWERED FIRST and submitted within 1 (one) Hour of the commencement of the Examination.**
- 3. While answering the questions of this booklet, any cutting, erasing, overwriting or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question only.**

*Signature of  
Scrutiniser(s)*

*Signature of  
Examiner(s)*

*Signature of  
Invigilator(s)*

**Booklet No. A**

Date Stamp .....

.....

.....

**To be filled in by the Candidate**

BA / BSc / BCom / BBA / BCA  
6th Semester End Term  
Examination, **2020**

Roll No. ....

Regn. No. ....

Subject .....

Paper .....

DESCRIPTIVE TYPE

Booklet No. B .....

**Bc/Bs-603**

**2 0 2 0**

( 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) Statistics can

(i) prove anything ( )

(ii) disapprove anything ( )

(iii) neither prove nor disapprove anything, is just a tool ( )

(iv) None of the above ( )

( 2 )

(b) Data are generally obtained from

- (i) primary sources ( )
- (ii) secondary sources ( )
- (iii) both primary and secondary sources ( )
- (iv) None of the above ( )

(c) The coefficient of correlation

- (i) can be less than 1 ( )
- (ii) can be more than 1 ( )
- (iii) varies between 1 ( )
- (iv) None of the above ( )

(d) Probable error is

- (i) 0.06745 SE ( )
- (ii) 0.6457 SE ( )
- (iii) 0.6753 SE ( )
- (iv) 0.6547 SE ( )

( 3 )

(e) The best average in the construction of index numbers is

(i) median ( )

(ii) geometric mean ( )

(iii) mode ( )

(iv) arithmetic mean ( )

(f) Laspeyres' index is based on

(i) base year quantities ( )

(ii) current year quantities ( )

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

(iv) average of current and base year ( )

(g) In forecasting

(i) only future course of events is important ( )

(ii) only past is important ( )

(iii) neither future nor past is important ( )

(iv) both future and past are important ( )

( 4 )

(h) A time series consists of data arranged

(i) in ascending order ( )

(ii) in descending order ( )

(iii) chronologically ( )

(iv) None of the above ( )

(i) Non-sampling errors include

(i) bias ( )

(ii) mistakes ( )

(iii) both bias and mistakes ( )

(iv) None of the above ( )

(j) If an event cannot take place, the probability will be

(i) 1 ( )

(ii) 1 ( )

(iii) 0 ( )

(iv) None of the above ( )

( 5 )

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

(a) Sampling errors are present both in a census as well as a sample survey.

*True* (    )      *False* (    )

(b) Arithmetic Mean is always the best measure of central tendency.

*True* (    )      *False* (    )

(c) Fisher's ideal index is known as the ideal formula for construction of index numbers.

*True* (    )      *False* (    )

(d) Qualitative methods of forecasting are more commonly used in practice as compared to the quantitative method.

*True* (    )      *False* (    )

(e) Probability derived from past experience is called empirical probability.

*True* (    )      *False* (    )

( 6 )

3. Write short notes on any *five* of the following :  $2 \times 5 = 10$

(a) Random Sampling

( 7 )

(b) Empirical Relationship between Mean, Median  
and Mode



( 8 )

(c) Standard Error

( 9 )

(d) Splicing

( 10 )

(e) Conditional Probability

( 11 )

*(f)* Forecasting

( 12 )

(g) Base Shifting

\*\*\*

2020

( 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) Define statistics. Explain how statistics is useful in the decision-making process of business and management. 2+7=9

Or

- (b) Distinguish between primary and secondary data. Which one would you prefer? Briefly explain how they are collected. 4+1+4=9

2. (a) Find mean and median from the following data : 4+5=9

Class

Interval : 0-10 10-20 20-30 30-40 40-50 50-60 60-70

Frequency : 8 12 10 8 3 2 7

Or

- (b) Calculate Spearman's rank correlation coefficient from the following data : 9

X : 52 63 45 36 72 65 47 25

Y : 62 53 51 25 79 43 60 33

3. (a) Compute the consumer price index number of 1970 on the basis from the following data using (i) aggregate expenditure method and (ii) family budget method, and give comment : 9

Commodity	Price (₹)		Quantity in 1968
	in 1968	in 1970	
Rice	12	15	20
Wheat	15	18	30
Milk	10	12	10
Oil	30	35	25

Or

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

( 3 )

4. (a) Below are given the figures of production (in thousand quintals) of a sugar factory :

Year : 2013 2014 2015 2016

Production

(in '000 quintals) : 80 90 92 83

Year : 2017 2018 2019

Production

(in '000 quintals) : 94 99 92

Fit a straight line trend by the method of least square. 9

Or

- (b) What do you mean by moving average method? Discuss the advantages and disadvantages of moving averages in time series analysis. 3+3+3=9

5. (a) What is sampling? Discuss in brief about non-random sampling methods used in sampling. 2+7=9

Or

- (b) A problem of statistics is given to three students for solution. Their probabilities of solving it are  $\frac{1}{2}$ ,  $\frac{1}{3}$  and  $\frac{1}{4}$  respectively. What is the probability that the problem will be solved? 9

★★★