

FACULTY OF COMMERCE

B.Com. III – Semester (CBCS) Examination, November / December 2019
(Common Paper for General / Computers / Computer Applications /
Advertising / Foreign Trade and Tax Procedure Courses)

Subject: Business Statistics – I
Paper Code – BC – 306

Time: 3 Hours

Max.Marks: 80

PART – A (5x4 = 20 Marks)
[Short Answer Type]

Note: Answer any five questions in not exceeding 20 lines each.

- 1 Distrust of Statistics
- 2 Parts of a Table
- 3 False Base Line
- 4 Represent the following data with the help of Percentage Bar Diagram

Item of the Expenditure	Expenditure In Rs.
Food	5,000
Rent	10,000
Children's Education	4,000
Clothing	8,000
Medicines	2,000
Others	6,000

- 5 State whether the data is right or wrong along with the reasons if any
AM = 4.5, GM = 4.192 and HM = 4.02
- 6 Calculate the Geometric Mean for the data given below
5000, 500, 50, 0.5 and 0.05
- 7 Two workers on the same job show the following results:

Details	Worker X	Worker Y
Mean time of completing the Job (Minutes)	30	25
Standard Deviation (Minutes)	6	4

- i) Which worker is faster in completing the job?
- ii) Which worker is more consistent in time, he requires in completing the job.
- 8 A Research student calculated the value of r as +0.7 with 5 observations and concludes that the correlation is highly significant. Is he right? Give your explanation with proper workings

PART – B (5x12 = 60 Marks)
[Essay Answer Type]

Note: Answer following questions in not exceeding four pages
each using internal choice.

- 9 a) Present the following information in a suitable tabular form, supplying the figures not directly given.
In 2015 out of total 3000 workers in a factory, 2325 were members of a Trade Union. The number of women workers employed was 375, out of which 300 did not belong to any Trade Union.
In 2018, the number of union workers was 2585 of which 2400 were men. The number of non-union workers were 570, among which 230 were women.

OR

- b) Explain the steps involved in a Statistical Investigation.

- 10 a) The following data shows the expenditure of two families on various heads during 2018.

Expenditure Head	Expenditure (in Rs.)	
	Big Family	Small Family
Rent	9600	5400
Electricity, Telephone and Gas bills	6,400	3,600
Education	16,000	9,000
Conveyance	6,400	1,800
Food & Provisions	22,400	14,700
Functions and Miscellaneous	3,200	1,500
Total	64,000	36,000

Draw the Pie Diagrams for the data given above.

OR

- b) Locate Median by using Ogive Curves on a Graph paper.

Class Interval	10-20	20-30	30-40	40-50	50-60
Frequency	10	20	40	20	10

- 11 a) From the following information Calculate Median and Quartiles.

Marks	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60	Below 70	Below 80
No. of workers	4	10	24	50	70	85	95	100

OR

- b) Compute Mean using Direct Method and Step Deviation Method and Verify the answers.

Wages	0-100	100-200	200-300	300-400	400-500	500-600
No. of workers	14	20	42	24	20	10

- 12 a) Find Bowley's Coefficient of Skewness:

Wages more than (in Rs)	5	15	25	35	45	55	65
No. of workers	100	80	75	60	55	20	0

OR

- b) From the following data, calculate the Raw Moments and convert them into Central Moments:

X	0-10	10-20	20-30	30-40
f	1	3	4	2

- 13 a) The marks obtained by the students are tabulated below:

Marks in Science	19	25	14	9	25	14	22	15	25
Marks in Mathematics	30	30	11	22	18	22	14	15	11

Find the Rank Correlation Coefficient using repeated ranks formula.

OR

- b) Calculate Karl Pearson's Coefficient of Correlation between Advertisement Expenditure and Sales of a firm.

Advertisement Expenses ('000 Rs)	30	56	53	81	73	66	26	89	27	69
Sales (Lakhs Rs)	38	44	49	77	53	59	51	82	42	75