

5/COM-300 Syllabus-2023

2 0 2 5

(Nov-Dec)

FYUP : 5th Semester Examination

MAJOR

COMMERCE

(Business Statistics)

COM-300

Marks : 75

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Bring out the difference between
Pictogram and Cartogram. 5
- (b) In a sample study about coffee habit in
two towns, the following informations
were received :

(2)

Town A : Female were 40%, total coffee drinkers were 45% and male non-coffee drinkers were 20%

Town B : Males were 55%; male non-coffee drinkers were 30% and female coffee drinkers were 15%

Represent the above data in a tabular form. 10

Or

- (a) Briefly discuss on the importance and scope of statistics. 5
- (b) Represent the following data by a pie diagram : 10

Items	Expenditure (₹)
Food	8700
Recreation	1100
Rent	2500
Clothing	2400
Education	1300
Miscellaneous	2000

(3)

2. Calculate mode (by grouping method) from the following data : 15

Central size	Frequencies
15	5
25	9
35	13
45	21
55	20
65	15
75	8
85	3

Or

- (a) State the events where addition and multiplication rule of probability is applicable. 5
- (b) The mean weight of 150 students (boys and girls) in a class is 60 kg. The mean weight of boy students is 70 kg and that of girls is 55 kg. Find the number of boys and girls in the class. 10

(4)

3. (a) From the following data, calculate Karl Pearson's coefficient of correlation and comment on the result : 10

<i>Height of Father</i> (in inches)	<i>Height of Sons</i> (in inches)
66	65
68	64
69	67
72	69
65	64
59	60
62	59
67	68
61	60
71	64

- (b) Explain the concept of Time Reversal Test and Factor Reversal Test. 5

Or

- (a) What is meant by association of attributes? How does it differ from correlation? 2+3=5

(5)

- (b) Obtain the line of regression from the following data : 10

X : 4 5 6 8 11
Y : 12 10 8 7 5

4. (a) From the following data, calculate the trend values using 4-yearly moving averages : 10

Year	Values
2016	506
2017	620
2018	1036
2019	673
2020	588
2021	696
2022	1116
2023	738
2024	663

- (b) State Newton's interpolation formula for equal intervals and the assumptions underlying it. 5

(6)

Or

- (a) What are the various components of a time series? 5
- (b) The following are the annual premiums charged by the Life Insurance Corporation of India for a given policy. Calculate the premium payable at the age of 26 : 10

Age in years	Premium (₹ in '000)
20	23
25	26
30	30
35	35
40	42

5. Write short notes on any *three* of the following : 5×3=15

- (a) Misuse of statistics
- (b) Requisites of a good measures of averages

(7)

- (c) Chain based index numbers
- (d) Kurtosis
- (e) Utility of interpolation and extrapolation
