

2016

(2nd Semester)

ECONOMICS

(Honours)

Paper No. : ECO-202

[Quantitative Technique—II (Statistics)]

Full Marks : 70

Pass Marks : 45%

Time : 3 hours

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

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. (a) Define statistics. Discuss the use of statistics in economics. 2+6=8
- (b) Distinguish between census and sampling methods of collecting data. 3+3=6
2. (a) Describe various types of graph used in presentation of data. 6

(b) Draw a bar diagram to represent the following figures relating to manufacturing of fans : 8

Years	:	1984	1985	1986	1987	1988
No. of fans	:	1200	1700	1900	2800	2100

UNIT—II

3. (a) Write the merits and demerits of mean deviations. 2+2=4

(b) Define mode and calculate the values of mode from the following distribution : 2+8=10

Class interval	Frequency
10-20	4
20-30	6
30-40	5
40-50	10
50-60	20
60-70	22
70-80	24
80-90	6
90-100	2
100-110	1

4. (a) The following data relate to the age-group of government employees :

<i>Age</i>	<i>No. of employees</i>
50-55	25
45-50	30
40-45	40
35-40	45
30-35	80
25-30	110
20-25	170

Calculate standard deviation. 8

- (b) Calculate coefficient of range from the following data : 6

<i>Weekly wages (₹)</i>	<i>No. of labourers</i>
50-60	50
60-70	45
70-80	45
80-90	40
90-100	35
100-110	30
110-120	30

UNIT—III

5. (a) Distinguish between positive correlation and negative correlation. 2+2=4

(b) Ten competitors in a beauty contest were ranked by three judges in the following order :

1st judge : 1, 6, 5, 10, 3, 2, 4, 9, 7, 8

2nd judge : 3, 5, 8, 4, 7, 10, 2, 1, 6, 9

3rd judge : 6, 4, 9, 8, 1, 2, 3, 10, 5, 7

Use the method of rank correlation to determine which pair of judges has the nearest approach to common tastes in beauty. 10

6. (a) Write short notes on the following : 3+3=6

(i) Regression lines

(ii) Coefficient of regression

(b) From the following data, obtain the two regression equations : 4+4=8

Sales	Purchases
91	71
97	75
108	69
121	97
67	70
124	91
51	39
73	61
111	80
57	47

UNIT—IV

7. (a) Describe different methods of measuring seasonal variations. 6
- (b) What is time series? Discuss the limitations of moving average method for determining the trend in the analysis of time series. 2+6=8

8. (a) Explain the main problems which are faced in the construction of index number prices. 6
- (b) From the data given below, construct an index number by chain base method : 8

*Prices of a commodity
from 1975 to 1980*

1975	1976	1977	1978	1979	1980
50	60	62	65	70	78

UNIT—V

9. (a) Define probability and explain the importance of the concept in statistics. 2+4=6
- (b) Four cards are drawn at random from a pack. Find the probability that they are a king, a queen, a jack and an ace. 8

10. (a) Explain the following events : $2+2=4$

(i) Mutually exclusive event

(ii) Equally likely event

(b) Explain the meaning of the term
'mathematical expectation' with the help

of an example. $6+4=10$
