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(2nd Semester)

ECONOMICS

(Honours)

Paper : ECO–202

(**Quantitative Technique—II**)

(New Course)

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)* Describe the various types of graphs used in the representation of data. 7

(*Turn Over*)

(b) Draw a frequency curve for the data given below : 7

Class Interval	Frequency
25–35	7
35–45	9
45–55	22
55–65	7
65–75	3
75–85	2

2. *(a)* Distinguish between the Census and Sampling methods of collecting data. 3+3=6

(b) Draw less than ogive and more than ogive curves for the following data : 8

Class Interval	Frequency
25–30	3
30–35	4
35–40	4
40–45	5
45–50	15
50–55	7
55–60	3
60–65	4
65–70	2
70–75	1

(*Continued*)

(3)

UNIT—II

3. *(a)* Define mode. What are the merits and demerits of mode?   1+4=5

(b) Find Q_1, Q_2 and Q_3 for the following data :   3+3+3=9

Wages	No. of Workers
0–500	50
500–1000	72
1000–1500	104
1500–2000	120
2000–2500	96
2500–3000	53
3000–3500	42
3500–4000	46

4. *(a)* Calculate arithmetic mean for the following data using both the direct method and the indirect method (shortcut method) :   5+5=10

Class Interval	Frequency
0–10	12
10–20	15
20–30	28
30–40	25
40–50	20

(b) Write a short note on the different types of averages.   4

(4)

UNIT—III

5. *(a)* Define the following :   2+2=4

 (i) Variance

 (ii) Coefficient of variation

(b) Calculate the mean deviation from the median and also find its coefficient from the given data :   10

Age	No. of Persons
15–25	150
25–35	325
35–45	200
45–55	125

6. *(a)* Define mean deviation. What are its merits and demerits?   4

(b) Find standard deviation and coefficient of variation for the following data :   10

Class Interval	Frequency
5–15	3
15–25	7
25–35	9
35–45	23
45–55	15
55–65	8
65–75	6
75–85	4

(5)

UNIT—IV

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

   (i) Consumer price index number

   (ii) Fisher's ideal index number

   (b) Using the method of semi-averages, fit a trend line for the following data : 8

Year	1980	1981	1982	1983	1984	1985	1986	1987
Output	380	400	650	720	690	600	870	930

8. *(a)* What are the four major types of variations or components of a time series? 4

   (b) From the given data—

   (i) calculate Laspeyres' index number;

   (ii) construct the cost of living index number using the family budget method :

Article	Quantity (2010)	Prices (2010)	Prices (2015)
Food	3	12	18
Cloth	12	1	0·90
Electricity	40	0·20	0·25
Rent	3	25	23
Miscellaneous	34	0·40	0·50

5+5=10

(6)

UNIT—V

9. *(a)* Calculate Karl Pearson's coefficient of correlation from the following data : 8

Price (in ₹)	Supply (in kg)
16	37
17	36
18	37
19	32
20	31
21	32
22	33
23	28
24	25
25	22

   (b) Define the following : 2+2+2=6

   (i) Coefficient of regression

   (ii) Line of best fit

   (iii) Spearman's rank correlation

10. *(a)* Obtain the two regression equations using the method of least squares from the data given below : 8

X	2	4	6	8	10
Y	5	7	9	8	11

   (b) What are correlation and regression analysis? Explain their use in Economics. 3+3=6

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