D3BEC2301

Reg. No..............................

Name: ....

THIRD SEMESTER BA DEGREE EXAMINATION, NOVEMBER 2024
(Regular/Improvement/Supplementary)
ECONOMICS
GECO3B03T: QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS - I

Time: 2 ½ Hours   **Maximum Marks: 80**

SECTION A: Answer the following questions. Each carries *two* marks.
(Ceiling 25 marks)

1. List out the functions of Statistics.
2. Distinguish between questionnaire and schedule.
3. What type of statistical data are best represented by diagrams?
4. Why is arithmetic mean considered to be the best average?
5. Comment on dispersion.
6. Differentiate between Lorenz curve and Gini coefficient.
7. Enumerate the different types of correlation.
8. What are the properties of correlation coefficient?
9. Why are the two regression lines present?
10. What are the characteristics of an index number?
11. Comment on the term 'Deflating'.
12. Define time series.
13. Define vital statistics. Give examples.
14. What is couple protection rate?
15. Explain the different methods of obtaining vital statistics.

SECTION B: Answer the following questions. Each carries *five* marks.
(Ceiling 35 marks)

16. Explain the tabulation of data and the various types of tables.
17. The mean wage of 100 laborers working in a factory running two shifts of 60 and 40 workers respectively are Rs.138. The mean wage of 60 labourers working in the morning shift is Rs.140. Find the mean wage of labourers working in the evening shift.
18. Define Kurtosis and explain various measures of Kurtosis.
19. Calculate Karl – Pearson's coefficient of correlation for the following data.

X	11	12	13	14	15	16	17	18	19	20
Y	32	13	29	25	24	24	24	21	18	15

(PTO)

20. For the following data find the two regression lines:

X	5	6	8	3	2
Y	3	5	10	2	1

21. Define Splicing of index numbers. Find the purchasing power of money for the following years.

Year	2018	2019	2020	2021	2022
Price index	100	250	320	450	600

22. What are the problems involved in the construction of an index number?
23. Describe the important measurements of mortality.

SECTION C: Answer any *two* questions. Each carries *ten* marks.

24. Calculate mean deviation about median for the following data. Also find coefficient of mean deviation.

Marks	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79
f	4	6	15	22	32	48	20	30

25. Calculate Spearman's rank correlation coefficient for the following data.

X	68	64	75	50	64	80	76	44	55	64
Y	64	58	68	45	89	60	68	48	52	77

26. Fit a straight line trend by the method of least squares and find trend values for the following data.

Year	2004	2005	2006	2007	2008	2009	2010
Production(in thousand tons)	64	77	88	94	85	92	98

27. Explain the following terms used in vital statistics:
   (i) C.B.R (ii) G.F.R. (ii) S.F.R (iv) T.F.R. and (v) N.R.R.

(2 × 10 = 20 Marks)