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# B A DEGREE END SEMESTER EXAMINATION - OCTOBER 2022 <br> SEMESTER 5 : ECONOMICS <br> COURSE : 19U5CRECO7-QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS 

(For Regular - 2020 Admission and Supplementary - 2019 Admission)
Time : Three Hours
Max. Marks: 75
PART A
Answer All (1 mark each)

1. Define Lorenz curve.
2. What is a foot note?
3. Name the different averages.
4. Define correlation coefficient.
5. Define statistics in plural sense.
6. Define Kurtosis.
7. What is a schedule?
8. Negative correlation
9. What is a frequency distribution?
10. Give any two examples of time series.

## PART B

## Answer any 8 (2 marks each)

11. Define median
12. What is meant by primary data?
13. Under what circumstances is the rank correlation used?
14. How do you intrepret the correlation on the basis of probable error?
15. Distinguish between probability and non-probability sampling.
16. Define non-sampling error.
17. Define mean deviation.
18. State the positions of mean,median and mode in positively skewed and negatively skewed distributions.
19. What do you mean by irregular variations?
20. Define census method.

## PART C

Answer any 5 (5 marks each)
21. What are the functions of an average?
22. What are the measures of skewness?
23. What are the characteristics of an ideal classification?
24. Calculate mode from the following data:

| Size | $10-15$ | $15-20$ | $20-25$ | $25-30$ | $30-35$ | $35-40$ | $40-45$ | $45-50$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $f$ | 4 | 8 | 18 | 30 | 20 | 10 | 5 | 2 |

25. Represent the following distribution by an ogive.

| Marks | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ | $60-70$ | $70-80$ | $80-90$ | $90-100$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of <br> Students | 5 | 13 | 12 | 11 | 8 | 4 | 1 | 3 | 1 | 2 |

26. Explain how will you use the following methods in determining correlation: a) Scatter diagram , b) Karl pearson's correlation coefficient
27. What are the factors responsible for seasonal variations?

## PART D

## Answer any 2 (12 marks each)

28. What are complex random sampling methods?
29. Elucidate on regression analysis.
30. Compute Mean Deviation and S.D from the following data.

| Marks (above) | 10 | 20 | 30 | 40 | 50 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| No. of students | 100 | 88 | 70 | 41 | 19 |

31. The following are the annual profits in thousands of rupees in a certain business

| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Profit (in <br> '000 Rs) | 60 | 72 | 75 | 65 | 80 | 85 | 95 |

Using the method of least squares fit a straight line to the above data. Also make an estimate of profit in 2009. Estimate the trend values for all years. Compute short term fluctuations. Plot the given value and trend values on a graph.

