

**B.Sc. Semester-IV Examination, 2022-23****ECONOMICS [Honours]**

Course ID : 41611 Course Code : SH/ECO/401/C-8

Course Title : Statistical Methods for Economics-I

Time : 2 Hours

Full Marks : 40

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** of the following questions:

2×5=10

- What do you mean by 'secondary data'?
- Define central moment.
- Mention one function of index number.
- Write down the meaning of 'partial correlation'.
- Define infant mortality rate.
- Write down the meaning of crude birth rate.
- How can you measure seasonal variation?
- Write down one use of life table.

2. Answer any **four** of the following questions:

5×4=20

- Explain the meaning of cost of living index number.
- Write down a short note on 'Lorenz curve'.
- How the growth of population of an economy affects its pace of economic development?
- Explain the properties of Arithmetic mean (AM). Prove that  $GM^2 = AM \times HM$ ; where GM stands for Geometric mean and HM stands for Harmonic mean.
- Draw an Ogive for the following frequency distribution by less than type method and also find its median from the graph: 2+3

Marks	0- 10	10-20	20-30	30-40	40-50	50-60
Number of Students	7	10	23	51	6	3

- Calculate the mode for the frequency distribution given below:

Age group of employees	20-30	30-40	40-50	50-60
Number of Employees	30	55	44	25

3. Answer any **one** of the following questions:

$$10 \times 1 = 10$$

- a) What do you mean by correlation between two variables? Find the Spearman's rank correlation coefficient between  $x$  and  $y$ . 2+8

$x$	4	7	8	5	8	12
$y$	7	6	6	4	6	10

- b) Calculate the variance and standard deviation for the following frequency distribution: 5+5

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	27	10	7	5	4	2

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