



QP CODE: 23105546

Reg No :

Name :

**B.A DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS,
MARCH 2023**

Sixth Semester

B.A Economics Model I

CORE COURSE - EC6CRT11 - QUANTITATIVE METHODS

2017 Admission Onwards

1C022614

Time: 3 Hours

Max. Marks : 80

Instructions to Private candidates only: This question paper contains **two** sections. Answer **SECTION I** questions in the answer-book provided. **SECTION II**, Internal Examination questions must be answered in the question paper itself. Follow the detailed instructions given under **SECTION II**

SECTION I

Part A

Answer any **ten** questions.

Each question carries **2** marks.

1. What is convenience sampling?
2. Explain multi-stage sampling.
3. What is classification?
4. Find the geometric mean of 4 and 3.
5. Calculate the mean deviation of the following values; 2, 4, 7, 8 and 9.
6. Calculate the standard deviation of the following values: 5, 10, 25, 30, 50
7. Explain Correlation and Correlation Coefficient.
8. Explain Simple regression analysis.
9. If two regression coefficients are 0.91 and 0.48, find correlation coefficient
10. Define Index Number.
11. Define Family Budget.





12. Define the method of Least Squares.

(10×2=20)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Explain the characteristics of statistical data.
14. Explain the role of statistics in economics.
15. Explain Census Survey.
16. Find the Arithmetic Mean for the following frequency distribution

| | | | | | | | |
|---|---|---|----|----|----|----|---|
| X | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Y | 5 | 9 | 12 | 17 | 14 | 10 | 6 |

17. What is Lorenz Curve? Write down the steps to construct a Lorenz Curve.
18. What are the uses of correlation in Economics?
19. Explain the properties of Karl Pearson coefficient correlation.
20. Estimate the simple index number using: (a) Aggrgartive method, (b) Average of price relative method

| Commodity | Price in 1992 | Price in 1999 |
|-----------|---------------|---------------|
| A | 28.3 | 32.5 |
| B | 34.5 | 40.0 |
| C | 16.2 | 20.0 |
| D | 25.0 | 27.5 |

21. Estimate 4 yearly moving averages from the following data.

| Year | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|--------|------|------|------|------|------|------|------|------|------|------|
| Values | 14 | 18 | 20 | 24 | 30 | 28 | 36 | 40 | 48 | 46 |

(6×5=30)

Part C

Answer any **two** questions.





Each question carries **15** marks.

22. Describe the various methods of probability sampling

23. Calculate the Mean , Median and Mode for the following frequency distribution :

| | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X | 10-13 | 13-16 | 16-19 | 19-22 | 22-25 | 25-28 | 28-31 | 31-34 | 34-37 | 37-40 |
| Frequency | 8 | 15 | 27 | 51 | 75 | 54 | 36 | 18 | 9 | 7 |

24. From the following data (a) write down the two regression equations also (b) estimate the most likely value of y when x= 70

| | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| X: | 49 | 48 | 56 | 59 | 58 | 53 | 52 | 48 | 47 | 54 | 68 | 64 |
| Y: | 45 | 43 | 43 | 46 | 50 | 51 | 49 | 53 | 44 | 50 | 59 | 60 |

25. Calculate the price index number by (a) Paasche's method, (b) Laspeyre's method, (c) Fisher's method and (d) Edgeworth method

| Commodity | 2000 | | 2005 | |
|-----------|------------|----------------|------------|----------------|
| | Price (Rs) | Quantity (Kgs) | Price (Rs) | Quantity (Kgs) |
| A | 20 | 8 | 40 | 6 |
| B | 50 | 10 | 60 | 5 |
| C | 40 | 15 | 50 | 10 |
| D | 20 | 20 | 20 | 15 |

(2×15=30)

