## BA DEGREE (CBCS) EXAMINATION, MARCH 2020

Sixth Semester

B.A Economics Model I

## Core course - EC6CRT11 - QUANTITATIVE METHODS

2017 Admission Onwards
93BDEF47
Instructions for 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

Time: 3 Hours
Maximum Marks :80

## Part A

Answer any ten questions.
Each question carries 2 marks.

1. What you mean by population
2. Explain quota sampling
3. Explain frequency polygon
4. Define Median.
5. Define Mode.
6. Define Quartile deviation.
7. Correlation.
8. Spearman's Rank correlation
9. Explain Cause and effect relationship
10. Find the Index number using a simple aggregative method

| Commodity | Base Price | Current <br> Price |
| :---: | :---: | :---: |
| Rice | 35 | 42 |
| Wheat | 30 | 35 |
| Pulse | 40 | 38 |
| Flsh | 107 | 120 |

11. Write a note on Additive and Multiplicative methods of time series.
12. Mention two merits and demerits of free hand method.
13. What are the merits and demerits of secondary data
14. What are the different parts of a table
15. Represent the following table by mean of a more than ogives

Class : 0-5 $\quad 5-10$ 10-15 $\quad 15-20 \quad 20-25 \quad 25-30 \quad 30-35$
Frequency : $2 \quad 5 \quad 12 \quad 20 \quad 16 \quad 10 \quad 5$
16. Calculate the Mean for the following class data

| Class Interval | $0-8$ | $8-16$ | $16-24$ | $24-32$ | $32-40$ | $40-48$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frquency | 8 | 7 | 16 | 24 | 15 | 7 |

17. Calculate range and Q.D. of the following observations: $20,25,29,30,35,39,41,48,51,60$ and 70
18. Distinguish between Linear and Nonlinear Correlation
19. Find out the correlation co-efficient

| $\mathrm{X}:$ | 10 | 8 | 6 | 4 |
| :---: | :---: | :---: | :---: | :---: |
| 2 |  |  |  |  |
| $\mathrm{Y}:$ | 3 | 7 | 11 | 15 |

20. Explain the steps involved in the construction of Index Number.
21. Describe the different components of time series.
$(6 \times 5=30)$

## Part C

Answer any two questions.
Each question carries 15 marks.
22. What is primary data. Explain the methods of collecting primary data
23. The yield of wheat and rice per acre for 10 districts of a state is as under:

| District | A | B | C | D | E | F | G | H | I | J |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Wheat | 12 | 10 | 15 | 19 | 21 | 16 | 18 | 9 | 25 | 10 |
| Rice | 22 | 29 | 12 | 23 | 18 | 15 | 12 | 34 | 18 | 12 |

Calculate for each crop ( Wheat and Rice) (i) Range (ii) Q.D. (iii) Standard deviation
24.

From the following demand schedule write down the regression equations.Also (a) estimate demand when price is Rs. 20 and (b) estimate price when demand is 40 kg

| Price (in Rs.) | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Demand (in kg) | 38 | 36 | 36 | 33 | 33 | 32 | 30 | 28 |

25. Show that Fisher's "Ideal' price index number satisfies both the time-reversal test and factor reversal tests and verify this from the following table.

| Commodity | 2000 | Quantity | 2005 | Price |
| :--- | :--- | :--- | :--- | :--- |
|  | Price | 50 | 10 | 56 |
| A | 6 | 100 | 2 | 120 |
| B | 2 | 60 | 6 | 60 |
| C | 4 | 30 | 12 | 24 |
| D | 10 | 40 | 12 | 36 |
| E | 8 |  |  |  |

