$\qquad$ Name :

## B.A DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, MAY 2023

Second Semester
B.A Corporate Economics Model III

Core Course - EC2CRT05 - ELEMENTARY STATISTICS FOR ECONOMICS-II
2017 ADMISSION ONWARDS
17C213CF
Time: 3 Hours
Max. Marks : 80

## Part A <br> Answer any ten questions. <br> Each question carries 2 marks.

1. Define law of inertia of large numbers.
2. Differentiate questionnaire and schedule.
3. Define non-sampling errors.
4. What are the different types of correlation?

What would be your interpretation if the correlation coefficient $r$ is equal to

1) 0
5. 2) -1
3) 1
4) 0.2
6. Define multiple regression.
7. Define method of least squares.
8. Charactestics of index numbers.
9. What is fishers method?
10. What is splicing?
11. What are the importance of time series?
12. Merits of moving average method.

## Part B

Answer any six questions.
Each question carries 5 marks.
13. Distinguish between census method and sample survey method.
14. Differentiate simple random sampling and stratified random sampling.
15. What are the steps in developing sample design?
16. Explain scatter diagram.

Compute correlation coefficient
17.

| X | 12 | 20 | 15 | 22 | 18 | 24 | 20 | 12 | 15 | 22 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| y | 30 | 35 | 28 | 36 | 29 | 39 | 30 | 25 | 30 | 38 |

18. What are the properties of regression analysis?

CALCULATE FISHERS INDEX NUMBER and examine whether it satisfies

1) Time reversal test
2) Tactor revresal test
19. 

| items | 2009 price | 2009 quantity | 2010 price | 2010 quantity |
| :--- | :--- | :--- | :--- | :--- |
| A | 6 | 50 | 10 | 56 |
| B | 2 | 100 | 2 | 120 |
| C | 4 | 60 | 6 | 60 |
| D | 10 | 30 | 12 | 24 |

20. Explain the components of time series analysis.
21. What are the uses of secular trend?
$(6 \times 5=30)$

## Part C

Answer any two questions.
Each question carries 15 marks.

Calculate rank correlation coefficient
22.

| X | 50 | 60 | 70 | 65 | 80 | 85 | 90 | 92 | 40 | 96 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| y | 60 | 70 | 75 | 60 | 80 | 82 | 86 | 90 | 50 | 95 |

23. From the following data of the ages of husband and the age of wife ,form 2 regression equations and calculate husbands age when wifes age is $16 ?$

| Husbands <br> age | 36 | 23 | 27 | 28 | 28 | 29 | 30 | 31 | 33 | 35 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Wife's age | 29 | 18 | 20 | 22 | 27 | 21 | 29 | 27 | 29 | 28 |

From the following data construct index number using un weighted index number?
24.

| commodity | A | B | C | D | E |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Price in 1998 | 50 | 40 | 80 | 110 | 20 |
| Price in 2006 | 70 | 60 | 90 | 120 | 20 |

Trend equation is given by $3 x^{2}+2 x+4$ with 2000 as origin. Shift the origin to 2002 and obtain the equation?

