## B.A DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, OCTOBER 2022

Second Semester

## B.A Corporate Economics Model III

## Core Course - EC2CRT05 - ELEMENTARY STATISTICS FOR ECONOMICS-II 2017 ADMISSION ONWARDS <br> 761D4104

Time: 3 Hours
Max. Marks : 80

## Part A

Answer any ten questions.
Each question carries 2 marks.

1. Kinds of stratified random sampling.
2. What are the criteria for a good questionnaire?
3. Define non-sampling errors.
4. Define linear correlation.
5. What are the limits of correlation?
6. Define simple regression.
7. Define method of least squares.
8. Define index numbers.
9. What is paasches method?
10. What is chain base index number?
11. What are the components of time series?
12. Trend quation obtained is $y=12+0.7 x$ with 2008 as the origin ,find the trend quation shifting the origin to 2010.

## Part B

Answer any six questions.
Each question carries 5 marks.
13. Distinguish between census method and sample survey method.
14. What are the theoretical basis of sampling?
15. Distinguish between sampling and non sampling errors.
16. Explain scatter diagram.
17. What are the properties of correlation coefficient?
18. What are the limitations of regression analysis?
19. Calculate price index number

| items | price in 1998 | price in 2008 |
| :--- | ---: | ---: |
| A | 5 | 7 |
| B | 10 | 12 |
| C | 15 | 25 |
| D | 20 | 18 |
| E | 8 | 9 |

20. Write the importance of time series analysis.
21. What are the uses of secular trend?

## Part C

Answer any two questions.
Each question carries 15 marks.
22. Calculate rank correlation coefficient

| x | 3 | 5 | 8 | 4 | 7 | 10 | 2 | 1 | 6 | 9 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| y | 6 | 4 | 9 | 8 | 1 | 2 | 3 | 10 | 5 | 7 |

23. You are given the following data

|  | x | y |
| :--- | ---: | ---: |
| Arithmetic <br> mean | 985 | 12.8 |
| Standard <br> deviation | 70.1 | 1.6 |

correlation coefficient=0.52, find 2 regression equations.
24. Calculate FISHERS INDEX NUMBER and examine whether it satisfies 1) time reversal test 2) factor revresal test

| items | 2009 <br> price | 2009 <br> quantity | 2010 <br> price | 2010 <br> quantity |
| :--- | :--- | :--- | :--- | :--- |
| A | 12 | 10 | 15 | 12 |
| B | 15 | 7 | 20 | 5 |
| C | 24 | 5 | 20 | 9 |
| D | 5 | 16 | 5 | 14 |

25. Fit a straight line trend by the method of least squares

| year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| value | 380 | 400 | 650 | 720 | 690 | 600 | 870 | 930 |

