## B.A DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, DECEMBER 2021 <br> Second Semester <br> B.A Corporate Economics Model III <br> Core Course - EC2CRT05 - ELEMENTARY STATISTICS FOR ECONOMICS-II <br> 2017 ADMISSION ONWARDS <br> 8D5894F6

Time: 3 Hours
Max. Marks : 80
Part A
Answer any ten questions.
Each question carries $\mathbf{2}$ marks.

1. What is stratified random sampling?
2. Differentiate questionnaire and schedule.
3. Define sampling errors.
4. What are the limits of correlation?
5. What are the merits of scatterdiagram?
6. Define linear regression.
7. Define method of least squares.
8. Charactestics of index numbers.
9. What are the methods for measuring weighted index numbers?
10. What is value index number?
11. What are the importance of time series?
12. What is cyclic variation?

## Part B

Answer any six questions.
Each question carries 5 marks.
13. What are the merits of sampling method?
14. Characterestics of sampling.
15. What are the steps in developing sample design?
16. Different kinds of correlation.
17. Find rank correlation coefficient

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

18. Write the difference between correlation and regression?
19. Calculate index number

$\left.$| commodity | price |
| :--- | ---: | ---: |
| in |  |
| in |  |
| 1997 |  | | price |
| :--- |
| in |
| 2007 | \right\rvert\, | A | 90 | 95 |
| :--- | ---: | ---: |
| B | 40 | 60 |
| C | 90 | 110 |
| D | 30 | 35 |

20. Trend equation obtained is $\mathrm{y}=12+0.7 \mathrm{x}$ with 2008.find the trend equation shifting the origin to 2010 .
21. What are the uses of secular trend?
$(6 \times 5=30)$

## Part C

Answer any two questions.
Each question carries 15 marks.
22. Find Karl pearsons' coefficient of correlation

| X | 78 | 89 | 96 | 69 | 59 | 79 | 68 | 61 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| y | 125 | 137 | 156 | 112 | 107 | 136 | 123 | 108 |

23. You are given the following data

|  | $x$ |  |
| :--- | ---: | ---: |

Correlation coefficient=0.66, 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 | quantity <br> qua | price | quantity |
| :--- | :--- | :--- | :--- | :--- |
| A | 12 | 10 | 15 | 12 |
| B | 15 | 7 | 20 | 5 |
| C | 24 | 5 | 20 | 9 |
| D | 5 | 16 | 5 | 14 |

25. Using 2004 as the origin,find trend equation by least squares.

| year | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| value | 140 | 144 | 160 | 152 | 168 | 176 | 180 |

