### Second Semester FYUGP Commerce Examination
### APRIL 2025 (2024 Admission onwards)
### KU2DSCCOM110 (QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS)
### (DATE OF EXAM: 02-05-2025)

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Time : 120 min                                          Maximum Marks : 70

### Part A (Answer any 6 questions. Each carries 3 marks)

1. What is perfect positive correlation?                                3

2. What is Karl Pearson's Coefficient of Correlation?                   3

3. If the correlation coefficient between two variables is 0.85, what does this imply about their relationship?                                        3

4. Define Irregular Variation.                                          3

5. Explain Multiplicative Model.                                        3

6. What is Sample space?                                                3

7. Define mutually exclusive event.                                     3

8. A coin is tossed twice. Find the probability of getting: a) Two heads, b) At least one head, c) No head                                              3

### Part B (Answer any 4 questions. Each carries 6 marks)

9. Explain Applications of Quantitative Techniques?                     6

10. Explain the uses of correlation.                                    6

11. Explain the various methods of studying correlation.               6

12. Discuss the different schools of thought on the interpretation of probability.   6

13. If the probability of event A is 0.7 and the probability of event B given A is 0.4, what is the probability of both A and B occurring?                  6

14. In a sports competition, the probability that a student plays football is 0.4, the probability that the student plays cricket is 0.5, and the probability that the student plays both sports is 0.2. Find the probability that the student plays: a) Football or cricket, b) Neither football nor cricket.                   6

### Part C (Answer any 2 question(s). Each carries 14 marks)

15. Discuss the uses of regression in real life                        14

16. Calculate two regression equation and estimate X, when Y= 26

| X | 10 | 12 | 13 | 17 | 18 | 20 | 24 | 30 |
|---|----|----|----|----|----|----|----|----|
| Y | 5  | 6  | 7  | 9  | 13 | 15 | 20 | 21 |

14

17. Define time series. Explain various components of time series.     14