

**25U261**

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Name : .....

Reg. No : .....

**SECOND SEMESTER UG DEGREE EXAMINATION, APRIL 2026**

(FYUGP)

(Regular/Supplementary/Improvement)

**CC24UBBA2CJ103 - FOUNDATIONS FOR BUSINESS ANALYTICS**

(B.B.A. - Major Course)

(2024 Admission onwards)

Time: 2.0 Hours

Maximum: 70 Marks

Credit: 4

**Part A** (Short answer questions)

Answer *all* questions. Each question carries 3 marks.

1. Explain random experiment. [Level:2] [CO1]
2. The letters of the word 'STATISTICS' are written on 10 identical cards. If two cards are drawn at random, what is the probability that (1) one 'S' and one 'T' will occur (2) two 'T' will occur [Level:2] [CO1]
3. Define Poisson distribution. [Level:2] [CO2]
4. What you mean by simple, partial and multiple correlation? [Level:2] [CO3]
5. Can non-probability sampling be used in all research studies. Why or why not? [Level:3] [CO3]
6. Explain the difference between point estimation and interval estimation? Provide an example of each. [Level:2] [CO3]
7. Explain Confidence Intervals [Level:2] [CO1, CO2, CO3, CO4, CO5]
8. Explain the concept of regression . [Level:2] [CO3]
9. Explain the method of least squares. [Level:2] [CO4]
10. Index Numbers are specialised averages. Explain. [Level:2] [CO4]

**(Ceiling: 24 Marks)**

**Part B** (Paragraph questions/Problem)

Answer *all* questions. Each question carries 6 marks.

11. State the addition and multiplication theorems of probability [Level:2] [CO1]
12. Explain in detail the different types of Business Analytics ? [Level:2] [CO1]

13. 4 dice are thrown 162 times. The occurrence of '2 or 3' is considered a success. In how many throws, do you expect (1) exactly 2 success (2) at least one success. [Level:3] [CO2]
14. What is the probability density function (PDF) of a continuous random variable, and how is it related to the cumulative distribution function (CDF)? [Level:2] [CO2]
15. What is the difference between a population parameter and a sample statistic? Provide examples of each and explain their significance in statistical analysis [Level:3] [CO3]
16. In a correlation analysis the value of the karl pearson coefficient of a correlation and its probable error were found to be .90 and .04 respectively. Find out the value of "n". [Level:3] [CO3]
17. How are Index Numbers constructed ? Explain the different methods used. [Level:2] [CO4]
18. You are given the following data: Using simple average of price relatives prepare two price index numbers from the above data ie (i) Price index for 2008 with base 2005, and (ii) A price index for 2005 with base 2008.

| Commodity | Price |      |
|-----------|-------|------|
|           | 2005  | 2008 |
| Wheat     | 170   | 140  |
| Rice      | 200   | 180  |

[Level:3] [CO4]

(Ceiling: 36 Marks)

### Part C (Essay questions)

Answer any **one** question. The question carries 10 marks.

19. Explain normal distribution. What are the properties of normal distribution? [Level:2] [CO2]
20. From the following data , obtain the two regression equation. [Level:3] [CO3]
- Sales : 91 97 108 121 67 124 51 73 111 57
- Purchases : 71 75 69 97 70 91 39 61 80 47

(1 × 10 = 10 Marks)

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