

B COM DEGREE END SEMESTER EXAMINATION - APRIL 2025**UGP (HONS.) SEMESTER - 2: DISCIPLINE SPECIFIC COURSE****COURSE: 24UCOMDSC105: QUANTITATIVE TECHNIQUES FOR BUSINESS DATA ANALYSIS***(For Regular 2024 Admission)*

Time: 1.5 Hours

Max. Marks - 50

PART A**Answer any 5 questions. Each question carries 2 marks (2 × 5 = 10 Marks)**

1. What do you mean by Index Numbers? (U)
2. Explain the complement of event A with the help of example? (U)
3. What is the probability that a leap year selected at random will contain 53 Sundays? (A)
4. Explain Wholesale price index. (U)
5. C is the wife of B, E is the son of C, A is the brother of B and father of D. What is the relationship of E to D? (A)
6. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child? (A)
7. Explain Annuity. (A)
8. Differentiate between simple and compound interest. (An)

PART B**Answer any 4 questions. Each question carries 5 marks (5 × 4 = 20 Marks)**

9. The probability that a contractor will get a plumbing contract is $\frac{2}{3}$ and probability that he will not get an electric contract is $\frac{5}{9}$. If the probability of getting at least one contract is $\frac{4}{5}$, what is the probability that he will get both the contracts? (An)
10. State the importance of Time series analysis. (U)
11. On what sum will the compound interest at 5% per annum for two years compounded annually by Rs. 1640? Also Explain Effective Rate of return with the help of an example. (An,U)
12. A) A's Mother is the sister of B and she has a daughter C who is 21 years old. How is A related to B. state reason for your answer.
B) A start from a point and runs 5kms North. Then turns left and walks 3kms. Then again turns left and walks 5kms. Point out the direction in which he is going now. Show reason for your answer. (A)
13. Apply the method of semi averages to determine the trend (A)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Value	10	12	15	20	18	25	24	28	34

14. Statement: All Boys are fathers
All Fathers are mothers
Conclusion: All Fathers are boys
All Boys are mothers

Choose the correct answer for the above conclusions

- a) Only 1 follows
- b) Only 2 follows
- c) Either 1 or 2 follows
- d) Neither 1 nor 2 follows
- e) Both 1 and 2 follows

(A)

PART C**Answer any 2 questions. Each question carries 10 marks (2 × 10 = 20 Marks)**

15. Explain the help of an example the addition and multiplication rules of probability. (U)
16. Construct index numbers using 1) Fisher's formula 2) Laspeyres's Formula and 3) Paache's formula (A)

Commodity	2007		2008	
	Price	Quantity	Price	Quantity
Wheat	20	60	40	55
Gramm	40	10	60	10
Veggies	20	20	40	25
Meat	120	10	160	15
Fish	40	10	60	10

17. Work out trend values by centred 4 yearly moving average method for the following data and plot the given values and trend values. (A)

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cargo Cleared	1102	1250	1180	1340	1212	1317	1452	1549	1586	1476	1614	1586