

Reg. No.....

Name.....

**B A, B SC, B COM DEGREE END SEMESTER EXAMINATION - APRIL 2026****UGP (HONS.) SEMESTER - 2: DISCIPLINE SPECIFIC COURSE****COURSE: 24UCOMDSC105: QUANTITATIVE TECHNIQUES FOR BUSINESS DATA ANALYSIS***(For Regular 2025 and Improvement/Supplementary 2024 Admission)*

Time: 1.5 Hours

Max. Marks - 50

**SECTION – A*****Answer any 5 questions. Each question carries 2 marks***

1. What do you mean by Price Index. (U)
2. Explain with example mutually exclusive and exhaustive events? (U)
3. If odds in favour of A solving a problem are 2 to 3 and odds against B solving the same problem are 3 to 5. Find the probability for both solving the same problem. (A)
4. State any two utilities on consumer price index (U)
5. Rounaq weighs 56.7kg. if he reduces his weight in the ratio 7:6. Find his new weight. (A)
6. X and Y are brothers. R is the father of Y. S is the only brother of T and the Maternal Uncle of X. what is T to R? (A)
7. Explain time value of money (U)
8. A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then what fraction of the work is left? (A)

**(2 × 5 = 10)****SECTION – B*****Answer any 4 questions. Each question carries 5 marks***

9. Write a note on the following:  
a) Dependent events b) Independent Events c) Union of two events (U)
10. For the following data calculate the ideal index

Commodity	2000		2008	
	Price	Quantity	Price	Quantity
A	10	4	12	5
B	8	3	10	4
C	5	8	5	7

D	12	2	12	3
E	6	9	7	8

(A)

11. Apply the method of semi averages to determine the trend

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Value	45	58	62	50	70	72	68	70	78	75

(A)

12. A) Explain the following 1) Future Value of Annuity 2) Interest

B) You invest Rs. 3000 in a two-year investment that pays you 12% per annum. Calculate the value of investment. (U, A)

13. 10 students A to J are sitting in a row facing west.

- B and F are not sitting on either of the edges
  - G is sitting left of D and H is sitting to the right of J
  - There are four persons between E and A
  - I is the north of B and F is the south of D
  - J is between A and D and G is in between E and F
  - There are two persons between H and C
- i. Who is sitting at the seventh place counting from left
    - a) H    b) C    c) J    d) Either H or C
  - ii. Who among the following is sitting at one of the ends?
    - a) C    b) H    c) E    d) Cannot be determined
  - iii. Who is the immediate neighbour of I
    - a) BC    b) BH    c) AH    d) Cannot be determined
  - iv. Who is sitting second left of D
    - a) G    b) F    c) E    d) J

Give reasons for your answers.

(A)

14. A) Find the odd one out

- I. a) January b) May c) July d) November
- II. 28, 33, 31, 36, 34, ?

B) If in a certain language MYSTIFY is coded as NZTUJGZ, how is MENESIS coded in that language?

C) if GOLD is coded as IQNF, how WIND can be written as a code?

Give reasons for your answers.

(A)

(5 × 4 = 20)

### SECTION – C

*Answer any 2 questions. Each question carries 10 marks*

15. A) Three persons A, B and C have applied for a job in a private company. The chance of their selections is in the ratio 1: 2: 4. The probabilities that A, B and C can introduce changes to improve the profits of the company are 0.8, 0.5 and 0.3, respectively. If the change does not take place, find the probability that it is due to the appointment of C.

B) In a neighbourhood, 90% children were falling sick due flu and 10% due to measles and no other disease. The probability of observing rashes for measles is 0.95 and for flu is 0.08. If a child develops rashes, find the child's probability of having flu. (A)

16. The data given below show the percentage increase in price of a few selected food items and the weights attached to each item. Calculate the index number of the group

Food item	refreshment	rice	wheat	dhal	ghee	oil	spice	Milk	Fish	Veg
Weight	33	11	8	5	5	3	7	9	9	10
Percentage increase	180	202	115	212	175	517	260	426	332	279

Using the above food index and the information given below calculate the cost-of-living index numbers. (A)

Group	Food	Clothing	Fuel and light	rent	Miscellaneous
index		310	220	150	300
Weight	60	5	8	9	18

17. Write a note on Time series analysis? State its importance and the explain the different methods of determining trends. (U, An)

(10 × 2 = 20)