

B A, BSC, BCOM DEGREE END SEMESTER EXAMINATION – MARCH 2026
UGP (HONS.) SEMESTER – 4: – DISCIPLINE SPECIFIC COURSE
COURSE: 24UECODSC206 – QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS
(For Regular 2024 Admission)

Time: 2 hours

Max. Marks: 70

PART A SHORT ANSWERS*Answer any four of the following questions*

1. What is the probability that a leap year will contain 53 sundays? (An, CO4)
2. Distinguish between leptokurtic and platykurtic distribution with the help of graphs. (U, CO2)
3. What are the limitations of the Moving Average Method? (U, CO3)
4. Which term of the A.P. 3, 15, 27, 39,...will be 120 more than its 21st term? (A, CO1)
5. What is the need for two regression lines? (U, CO5)
6. List out any 4 two-dimensional diagrams. (R, CO1)

(2 x 4 = 8)**PART B SHORT ESSAY***Answer any four of the following questions*

7. Calculate mode from the following data:

Marks above	0	10	20	30	40	50	60	70	80	90	100
No. of students	80	77	72	65	55	43	28	16	10	8	0

(An, CO2)

8. a) A piece of electronic equipment has two essential parts A and B. In the past, part A failed 30% of the times, part B failed 20% of the times and both parts failed simultaneously 5% of the times. Assuming that both parts must operate to enable the equipment to function, what is the probability that the equipment will function?
- b) In a certain college, 60% of all students engage in football, 50% of all students in basketball and 30% of all students in both football and basketball. If a student is selected at random, what is the probability that she will play football or basketball? Also find the probability that she will play neither sports. (A, CO4)

9. What are the characteristics of an ideal measure of dispersion? Explain which of the different measures of dispersion satisfy most of these characteristics. (U, CO2)

10. Draw a suitable diagram for the following data.

Year	1974	1975	1976	1977	1978	1979
Gross Profit	90000	83000	71000	70000	60000	50000
Expenditure	41000	38000	35000	35000	30000	20000

(E, CO1)

11. Compute the trend values by the method of semi-averages from the data given below:

Year	1992	1993	1994	1995	1996	1997	1998	1999
No. of sheep (in lakhs)	56	55	51	47	42	38	35	32

(A, CO3)

12. From the following data of the age of husband and the age of wife, form two regression equations and calculate the husband's age when wife's age is 16.

Husband's age	36	23	27	28	28	29	30	31	33	35
Wife's age	19	18	20	22	27	21	29	27	29	28

(A, CO5)

(8 x 4 = 32)

PART C LONG ESSAY

Answer any two of the following questions

13. a) Define independent and mutually exclusive events. Can two events be mutually exclusive and independent simultaneously? Support your answer with an example.
- b) The Federal Match Company has 40 female employees and 60 male employees. If two employees are selected at random what is the probability that
- both will be males
 - both will be females
 - there will be one of each sex.
- c) If a pair of dice is thrown, find the probability that the sum of the digits on them is neither 7 nor 11. (A, CO4)

14. Obtain the median and mode for the following data:

No. of days absent	No. of students
Less than 5	29
Less than 10	224
Less than 15	465
Less than 20	582
Less than 25	634
Less than 30	644
Less than 35	650
Less than 40	653
Less than 45	655

(A, CO2)

15. What are the various broad categories for classification of data?

(U, CO1)

16. Using 3-yearly moving averages, determine the trend of the data given below:

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Exports (in'000 tonnes)	21	22	23	25	24	22	25	26	27	26

(A, CO3)

(15 x 2 = 30)