K25FY3230 Pages: 2 Reg No:.....
Name:.....

Third Semester FYUGP Degree (Reg) Examination November 2025

KU3DSCECO202 - BASIC ANALYTICAL TOOLS FOR ECONOMICS

2024 Admission onwards

Time : 2 hours Maximum Marks : 70

Section A

Answer any 6 questions. Each carry 3 marks.

1. Differentiate discrete and continuous frequency distributions.
2. Describe a bar diagram.
3. Mention three limitations of mathematical economics.
4. Simplify

$$\left(\frac{24 \times 340}{12}\right) + 36$$

5. Solve 3 x − 13 = 29
6. Differentiate nominal and ordinal variables.
7. State any three limitations of statistics.
8. What do you mean by primary data?

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Section B

Answer any 4 questions. Each carry 6 marks.

9. "Mathematics brings accuracy and clarity to economics." Discuss with suitable examples.
10. With suitable examples, describe variables, constants and parameter in a mathematical model
11. Solve

$$\frac{2x+5}{5} + \frac{x-2}{4} = 7$$

12. Complete the table below

Variable	Continuous or Discrete
Birth weight of a newly born baby in	
Number of papers passed in an examination	
Number of years of experience in a job	
Level of water in a beaker (in cm3)	
Number of vehicles	
The number on the side of a die thrown	

13. Describe the various techniques used for collecting primary data.

14. Analyse the merits and demerits of census.

Section C

Answer any 2 questions. Each carry 14 marks.

15. Answer the following questions
    i Explain various types of functions used in mathematical analyses
    ii The demand and supply functions are given below, find the market equilibrium price and quantity
    Qd = 100-5P
    Qs = 20 + 3 P

16. The total revenue function of a firm is:
    $R(Q)=100Q-2Q^2$ and the total cost function is: $C(Q)=20Q+200$
    (i) Find the profit function.
    (ii) Calculate profit at Q=10 , Q=20 , and Q=30.
    (iii) Find the level of output where profit is maximized (using MR = MC condition).

17. Explain various measures of central tendency with relative merits and demerits and properties.

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