

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

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

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

1

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 cm ³)	
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
 $Q_d = 100 - 5P$
 $Q_s = 20 + 3P$
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.