

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S4 (R) (FT/WP) Examinations April 2026 (2024 Scheme)



Course Code: UCHUT346

Course Name: ECONOMICS FOR ENGINEERS

Max. Marks: 50

Duration: 2 hours 30 minutes

PART A

(Answer all questions. Each question carries 3 marks)

CO Marks

- 1 Explain the Law of Demand and the Law of Supply. CO1 (3)
- 2 If the price of a product decreases from ₹200 to ₹180 and as a result, the quantity demanded increases from 400 units to 550 units, calculate the price elasticity of demand. CO1 (3)
- 3 What is the kinked demand curve model in an oligopoly CO2 (3)
- 4 Differentiate between GDP<sub>MP</sub> (Market Price) and GNP<sub>FC</sub> (Factor Cost). CO3 (3)
- 5 Explain the concept of Demand-Pull Inflation. CO3 (3)
- 6 A project requires an initial investment of ₹1,00,000 and is expected to generate the following annual accounting profits: CO4 (3)

Year	1	2	3	4	5
Accounting Profit (₹)	18,000	20,000	22,000	25,000	25,000

Calculate the Accounting Rate of Return (ARR) for the project.

PART B

(Answer any one full question from each module, each question carries 8 marks)

Module -1

- 7 a) Explain the Law of Diminishing Marginal Utility. State its assumptions and illustrate it with a diagram. CO1 (6)

- b) Differentiate between labour-intensive technique and capital-intensive technique in the choice of technique. CO1 (2)

- 8 a) What is a demand curve? Distinguish between movement along the demand curve and shift of the demand curve. Draw a suitable diagram to support your answer. CO1 (6)

- b) The demand function is  $QD = 80 - 4P$  and the supply function is  $QS = 10 + 2P$ . Find the equilibrium price. CO1 (2)

### Module -2

- 9 a) Complete the following cost table by calculating the missing values of Total Fixed Cost (TFC), Total Variable Cost (TVC), Total Cost (TC), Average Fixed Cost (AFC), Average Variable Cost (AVC), and Average Cost (AC). The Marginal Cost (MC) values are provided for reference. CO2 (6)

Quantity	TFC	TVC	TC	AFC	AVC	AC	MC
0			150				
1							50
2							70
3							60
4							80

- b) A company sells a product at ₹250 per unit. The variable cost per unit is ₹150 and fixed costs are ₹20,000. Calculate the break-even quantity. CO2 (2)

- 10 a) Explain the main features of a monopoly market structure and briefly discuss how a monopolist is considered a "price maker" in the market. CO2 (6)

- b) Define Perfect Competition and state two main features of a perfectly competitive market. CO2 (2)

### Module -3

- 11 a) From the data given below, calculate Gross Domestic Product at Market Price ( $GDP_{mp}$ ) using the Expenditure Method, and Net National Product at Factor Cost ( $NNP_{fc}$ ) using the Income Method. CO3 (6)

Data (₹ in Crores): Private Consumption Expenditure = 5,000

Investment Expenditure = 3,000, Government Expenditure = 1,500

Exports = 900, Imports = 1,200, Wages and Salaries = 4,000,

Depreciation = 1,000, Indirect Taxes = 1,500, Subsidy = 500

Net Factor Income from Abroad (NFIA) = -400

- b) Explain how a change in the bank rate affects the money supply in an economy under monetary policy. CO3 (2)
- 12 a) Explain the fiscal measures used by the government to control inflation and how each measure helps in reducing excess demand in the economy. CO3 (5)
- b) Explain Repo Rate and Reverse Repo Rate. CO3 (3)

#### Module -4

- 13 a) Explain the Value Engineering procedure and illustrate how it can be applied to improve cost efficiency in a product or project. CO4 (5)
- b) Differentiate between Use Value and Esteem Value with examples. CO4 (3)
- 14 a) A project Y requires an initial investment of ₹3,00,000. The project's cost of capital is 10 %, and it generates the following cash flows over 5 years:

Year	1	2	3	4	5
Cash Flow (₹)	1,00,000	90,000	80,000	70,000	60,000

Calculate the Net Present Value (NPV) of Project Y.

- b) A project requires an initial investment of ₹1,20,000 and is expected to generate the following cash inflows. CO4 (3)

Year	1	2	3	4	5
Cash Inflow (₹)	30,000	40,000	35,000	25,000	20,000

Calculate the Payback Period of the project.

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