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Sr. No: 011305

Dec 2023

B. Tech (IT) - III SEMESTER

Economics for Engineers (HSMC-02)

Time: 3 Hours **Max. Marks:75**

Instructions:
1. *It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.*
2. *Answer any four questions from Part -B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART -A

Q1 (a) What is the difference between microeconomics and macroeconomics? (1.5)

(b) Define the concept of supply in economics. What factors influence the supply of a product? (1.5)

(c) What does the term "LPG" represent in the context of the Indian economy? (1.5)

(d) What are the differences between a central bank and commercial banks in terms of their functions, objectives, and roles within the financial system? (1.5)

(e) What are the primary factors of production? (1.5)

(f) Differentiate between internal and external economies of scale. (1.5)

(g) Explain the break-even analysis and its significance in business decision-making. (1.5)

(h) How does demand differ from the concept of wants or desires? (1.5)

(i) What is demand forecasting? (1.5)

(j) Explain the interplay between engineering and technology in the context of economic development. (1.5)

PART -B

Q2 Compare and contrast traditional and modern methods of capital budgeting. What are the key differences and advantages of modern methods such as NPV and IRR over traditional methods like payback period? (15)

Q3 (a) What is the Production Possibility Curve, and how does it illustrate the concept of opportunity cost? (7.5)

(b) What is the Time Value of Money, and why is it a critical concept in finance? How does it affect the evaluation of investment opportunities? (7.5)

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Q4 (a) Explain the Law of Demand and its basic principles. How does it describe the relationship between price and quantity demanded for a product or service? (7.5)

(b) Define the concept of elasticity of demand. What factors affect the elasticity of demand, and how do they influence consumer behavior and market dynamics? (7.5)

Q5 (a) Define the concept of the cost of production. How do various types of costs, such as accounting costs, sunk costs, marginal costs, and opportunity costs, factor into cost analysis for a business? (5)

(b) Discuss the relevance of depreciation in the industrial context. How does depreciation impact a company's financial statements and long-term investment decisions? (5)

(c) Provide a case study illustrating the "Make or Buy" decision that a company might face. (5)

Q6 (a) Explain the difference between Law of Variable Proportions and the concept of returns to scale. (5)

(b) Explain the law of variable proportions and its stages in detail. (10)

Q7 (a) Explain the main features of a perfectly competitive market, and contrast them with those of a monopoly, monopolistic competition, and oligopoly. How do these market structures affect pricing and competition? (10)

(b) Describe the nature and characteristics of the Indian economy. What are the key sectors and factors driving economic growth in India? (5)

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