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Total Number of Pages : 02

B.Tech  
REN3E001

3<sup>rd</sup> Semester Regular / Back Examination: 2021-22  
ENGINEERING ECONOMICS  
BRANCH(S): AEIE, AERO, AUTO, BIOTECH, C&EE,  
CHEM, CIVIL, CSE, CSEAIME, CST, ECE, EEE, ELECTRICAL,  
ETC, IT, MANUTECH, MECH, METTA, MINING, MME,  
MMEAM, PE, PLASTIC, PT

Time : 3 Hour

Max Marks : 100

Q.Code : OF656

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions :

(2×10)

- What are the three basic problems of an economy?
- Distinguish between a change in demand and change in quantity demanded
- Distinguish between fixed cost and variable cost
- Define the production function
- What is the margin of safety?
- What do you mean by the perfectly competitive market?
- Distinguish between annuity and annuity due
- What do you mean by depreciable property?
- What is demand-pull inflation?
- What is NNP at factor cost?

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 × 8)

- What is the relationship between the total expenditure and the elasticity of demand? Explain with numerical examples.
- Distinguish between a movement along a supply curve and shift in the supply curve. What are the factors which cause in the shift in the supply curve?
- What is the relationship between average cost and marginal cost? If the marginal cost is rising does it mean that the average cost must also be rising?
- Explain three stages of production in the short-run.
- Distinguish between perfect competition and monopoly
- If the demand and supply curve for the mobile phones are  $Q_d = 100 - 6P$ ,  $Q_s = 28 + 3p$ , what is the quantity of mobile phones bought and sold at equilibrium?
- A person is just 30 years old. He plans to invest an equal sum of Rs. 20,000 every year for the next 30 years from the end of next year. The bank gives 10 % interest compounded annually. Find the maturity value of his account when he is 60 years old.

h) The cost of erecting an oil well is Rs. 1, 50, 00, 000. The annual equivalent Income of oil well is Rs. 30, 00,000. The salvage value after its useful life of 10 years is Rs. 2, 00,000. Assuming an interest rate of 10 per cent compounded annually, find out whether the erection of the well is financially feasible, based on future-worth method.

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i) A company takes a loan of Rs. 20, 00,000 to modernize its boiler section. The loan is to be repaid in 20 equal installments at a 12 % interest rate, compounded annually. Find the equal installment amount that should be paid for the next 20 years

j) What are the two basic methods of depreciation? Explain by giving examples.

k) Discuss the various measures to control Inflation?

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l) Explain in brief the agency functions of a commercial bank.

### Part-III

#### Only Long Answer Type Questions (Answer Any Two out of Four)

Q3 What are the major determinants of price elasticity of demand? Use those determinants and your reasoning in judging whether demand for each of the following products is probably elastic or inelastic: (16)

a) bottled water

b) tooth paste

c) diamond bracelets

d) Microsoft windows operating system

Q4 A capital investment of Rs 10000 can be made in a project that will produce uniform annual revenue of Rs 5310 for five years then have a salvage value of Rs 2000, Annual expense will be Rs 3000. The company is willing to accept any project that will earn at least 10 per cent per year, before income taxes on all invested capital. Determine whether it is acceptable by using the IRR method. (16)

Q5 The following particulars are presented by XYZ Ltd for 2022. (16)

Sales: Rs 40,000

Fixed Cost: Rs. 12,000

Variable Cost: Rs. 20,000

a) Find out P/V Ratio, Break-even Sales, Margin of Safety

b) Calculate the effect of a 10% increase in Fixed Cost.

Q6 What is a central bank? Describe the functions of the central bank and discuss their significance. (16)

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