GALGOTIAS UNIVERSITY

ADMISSION NUMBER

School of Engineering

B.TECH Civil Engineering
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem VI - H1UB620T - Engineering Economics and Management

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Define staffing and list down its process.	K1(2)
2)	Explain the internal and external economies of scale.	K2(4)
3)	Explain the meaning of price elasticity of demand.	K2(6)
4)	When the price of a doll is Rs. 4, a doll maker supplies 8 dolls per day. If the price rises to Rs.5 per doll, he is willing to supply 10 dolls per day. Calculate the price elasticity of supply of dolls.	K3(9)
5)	If demand of the product has increased from 100 units to 200 units as a result of fall in the price from Rs. 20 to Rs. 15, calculate the price elasticity of demand.	K3(9)
6)	Distinguish between explicit cost and implicit cost.	K5(10)
7)	Bharat Engineering Works Limited is a major industrial machineries besides other engineering products. It has enjoyed market preference for its machineries because of limited competition in the field. Usually there have been more orders than what the company could supply. However, the scenario changed quickly because of the entry of two new competitors in the field with foreign technological collaboration. For the first time, the company faced problem in marketing its products with usual profit margin. Sensing the likely problem, the chief executive appointed Mr Arvind Kumar as general manager to direct the operations of industrial machinery division. Mr Kumar had similar assignment abroad before coming back to India. Mr Kumar had a discussion with the chief executive about the nature of the problem being faced by the company so that he could fix up his priority. The chief executive advised him to consult various heads of department to have first hand information. However, he emphasised that the company lacked an integrated planning system while members of the Board of Directors insisted on introducing this in several meetings both formally and informally.	K4(12)

After joining as General Manager, Mr Kumar got briefings from the heads of all departments. He asked all heads to identify major problems and issues concerning them. The marketing manager indicated that in order to achieve higher sales, he needed more sales support. Sales people had no central organisation to provide sales support nor was there a generous budget for demonstration teams which could be sent to customers to win business. The production manager complained about the old machines and equipments used in manufacturing. Therefore, cost of production was high but without corresponding quality. While competitors had better equipments and machinery, Bharat Engineering had neither replaced its age-old plant nor reconditioned it. Therefore to reduced the cost, it was essential to automate production lines by installing new equipment. Director of research and development did not have specific problem and therefore, did not indicate for any change. However, a principal scientist in R&D indicated on one day that the director of R&D, though very nice in his approach, did not emphasize on short-term research projects, which could easily increase production efficiency by at least 20 per cent within a very short period without any major capital outlay. Questions: (a) Discuss the nature and characteristics of the problems in this case. (b) What steps should be taken by Mr Kumar to overcome these problems?

8)	"Economics discusses the use of scarce resources for satisfying unlimited ends." Critically elaborate this definition of economics.	K5(15)
9)	A project costs Rs.1,00,000. It is expected to provide cash inflows as follows for 3 years. The company's cost of capital or required rate of return is 15%. Whether the project is acceptable?	K5(15)
10)	Ronald Wilson has won a million dollars in the state lottery that will pay him $50,000 annually in 20 annual installments. He will get thefirst installment right now. Using a discount rate of 10% per year, find the present value of all these payments.	K6(18)