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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, May 2021

Programme Name: B. Tech Civil Engineering   **Semester : VI**
Course Name : Engineering Economics, Estimation and Costing   **Time : 03 hrs**
Course Code : CIVL3024   **Max. Marks : 100**
Nos. of page(s) : 02

SECTION A
1. Each Question carries 5 Marks
2. Instruction: Complete the statement / Select the correct answer(s)

S. No.		Marks	CO
Q 1	List down important differentiating parameters between Microeconomics and Macroeconomics.	5	CO1
Q 2	Explain with the help of few examples define the concept of Substitute goods and Complementary goods.	5	CO1
Q 3	Highlight the important elements of Engineering decision-making for a civil engineering project with regard to the costing of the project.	5	CO2
Q 4	Define Time Value of Money, present value of Money and Future Value of Money by giving a simple related example.	5	CO2
Q 5	List down the important stages for estimation of the process of project costs of a civil engineering project.	5	CO3
Q6	Explain three most important requirements to make typical estimates. How these requirements are being sourced through.	5	CO4

SECTION B
1. Each question carries 10 marks.
2. Instruction: Write short / brief notes and draw diagrams where necessary.

Q 7	I. Define price elasticity of demand in economics along with the formula. II. Rahul advertises to sell the box of cookies for Rs.300/- a dozen. He manages to sell 50 dozen, and decides that he can charge more money. Hence, he raises the price to Rs.450 a dozen and sells further 60 dozen. What is the elasticity of demand? III. Assuming that the elasticity of demand is constant, how many would Rahul sell if the price were INR 600 a box?	10	CO1
Q 8	Explain the concept of Opportunity cost in making economic decisions by giving a suitable real-life example.	10	CO2

Q 9	Explain the importance of Rate of Return (ROR) and its relationship with Future value and present value. If the present value of an investment is Rs.100,000/-, the future value of the same is 4,00,000 and the time period is 30 years, calculate the annual compound interest rate for this return.	10	CO2
Q 10	Calculate the quantity of Cement (in bags), Sand, Coarse Aggregate and water required for a $5m^3$ volume of concrete for M15 Concrete Mix. Assume Water cement ratio and all other parameters like densities and unit weight accordingly. summarize your results at the last.	10	CO3
Q 11	Explain the application of the Bar Bending Schedule (BBS) in managing the steel work professionally at site. List down the steps through which a Bar Bending Schedule is being prepared. **OR** Explain the principles behind the two building estimate methods called Long wall/short wall method and Centre line method. Compare both the method and explain which one of the two is convenient.	10	CO3

SECTION-C
1. Each question carries 20 marks
2. Instruction: Write detailed answers and draw diagrams, where necessary.

| Q 12 | Differentiate between Preliminary estimates and Detailed estimate for a Govt. Civil Contract work. Under what conditions of deviations, the original estimate is subjected to the revised estimates.

OR

Write notes on following:
    A. Importance of Specifications and its classification for construction of different nature and class of construction of building.

    B. The difference between Site plan, Layout plan and Index plan by mentioning individual scale and coverage by the individual plan. | 20 | CO4 |