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20SCS321

Third Semester M.Tech. Degree Examination, Feb./Mar. 2022 Engineering Economics

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Briefly explain Role of Engineering Economics Analysis, with an example. (10 Marks)
b. Describe the different types of Elements in Decision Making Process. (10 Marks)

OR

- 2 a. List out different types of Estimating Models. (06 Marks)
b. Classify different Engineering costs with an example. (08 Marks)
c. Calculate the time required to produce the hundredth unit of a production run if the first unit took 32.0min to produce and the Learning – curve rate for production is 80%. (06 Marks)

Module-2

- 3 a. Compare Cash flows , Time value of money , Equivalence. (10 Marks)
b. Compute Simple and Compound interest , using an Interest rate 8% per year Compound interest. How will this change affect the amount that your friend pays you at the end of 5 years? (10 Marks)

OR

- 4 a. Derive Single Payment Compound Interest using Equivalence rule. (10 Marks)
b. Write a short note on : i) Nominal Interest ii) Effective Interest. (10 Marks)

Module-3

- 5 a. Explain Annual Cash Flow Analysis. (10 Marks)
b. Describe Internal Rate of Return Analysis with respect to Cash Flow Analysis. (10 Marks)

OR

- 6 a. Explain Benefit Cost Ratio Analysis. (10 Marks)
b. Briefly explain Sensitivity and Breakeven Analysis. (10 Marks)

Module-4

- 7 a. Briefly describe Definitions for Considering Inflation in Engineering Economy. (10 Marks)
b. Define Price Index. Explain Composite Versus Commodity Indexes. (10 Marks)

OR

- 8 a. Describe Cash flows that inflate at different rates in Engineering Economy. (10 Marks)
b. Show that different inflation rates per period in Price Index. (10 Marks)

Module-5

- 9 a. Briefly explain cost of Borrowed Money in Economic Analysis. (10 Marks)
b. Explain a selecting a minimum attractive rate of return in Inflation and Deflation taxes. (10 Marks)

OR

- 10 a. Illustrate Representative values of MARR used in Industry. (10 Marks)
b. Discuss Spread sheets, Cumulative Investments and the Opportunity Cost of Capital. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.