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| **Roll No.** |  |  |  |  |  |  |  |  |  |  |  |  |

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 **Bengaluru**

 **SOCSE / SOE**

 **End - Term Examinations - January 2025**

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| **Semester:** VII | **Date:** 02-01-2025 |
| **Course Code:** MGT2015 | **Time:** 09:30 am – 12:30 pm |
| **Course Name:** ENGINEERING ECONOMICS | **Max Marks:** 100 |
| **Program:** COM/CSE/CST/AI&ML/CSD/ECE/ | **Weightage:** 50% |

 **Instructions:**

1. ***Read all questions carefully and answer accordingly.***
2. ***Do not write anything on the question paper other than roll number.***

**Part A**

**Answer ALL the Questions. *(10 X 2 Marks = 20 Marks)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SL NO. | QUESTION | MARKS | COURSE OUTCOME NO. | BLOOM'S LEVEL |
| 1 | Define engineering economics. | **2 Marks** | **CO1** | **Remember** |
| 2 | What is the difference between microeconomics and macroeconomics? | **2 Marks** | **CO1** | **Remember** |
| 3 | State the law of demand. | **2 Marks** | **CO2** | **Remember** |
| 4 | Write any two determinants of supply. | **2 Marks** | **CO2** | **Remember** |
| 5 | Define break-even point. | **2 Marks** | **CO3** | **Remember** |
| 6 | State the meaning of isoquant. | **2 Marks** | **CO3** | **Remember** |
| 7 | Describe any two techniques of capital budgeting. | **2 Marks** | **CO4** | **Remember** |
| 8 | What is meant by the time value of money? | **2 Marks** | **CO4** | **Remember** |
| 9 | Give a brief note on cash reserve ratio. | **2 Marks** | **CO5** | **Remember** |
| 10 | What is public expenditure?. | **2 Marks** | **CO5** | **Remember** |

**Part B**

**Answer ALL the Questions. (5 x 7Marks = 35Marks)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL NO.** | **QUESTION** | **MARKS** | **CO** | **BLOOM'S LEVEL** |
| **11(a)** | Explain the principles of engineering economy and their relevance in decision-making for engineers. | **7 Marks** | **CO1** | **Understand** |
|  |  **OR** |  |  |  |
| **11(b)** | Explain production possibility curve with examples. | **7 Marks** | **CO1** | **Understand** |
| **12(a)** | Describe the law of demand and discuss its exceptions. | **7 Marks** | **CO2** | **Understand** |
|  |  **OR** |  |  |  |
| **12(b)** | Describe the theories of elasticity of demand, including price, income, and cross elasticity of demand, with examples. | **7 Marks** | **CO2** | **Understand** |
| **13(a)** | Calculate the break-even point for a product with a selling price of ₹5 per unit, fixed costs of ₹1,500, and variable costs of ₹3 per unit. Provide a table representing costs, revenue, and profit/loss for 100 units, 500 units, 750 units and 1000 units. | **7 Marks** | **CO3** | **Application** |
|  |  **OR** |  |  |  |
| **13(b)** | Explain internal and external economies of scale. Discuss their significance for production efficiency in businesses. | **7 Marks** | **CO3** | **Understand** |
| **14(a)** | Project A costs ₹78,000 and is expected to generate cash inflows of ₹9,000, ₹8,000, and ₹6,000 at the end of each year for the next three years. Project B costs ₹82,000 and is expected to generate 10,000, 12000 and 9000 for the next three years.Suggest the one to be selected using ARR method. | **7 Marks** | **CO4** | **Application** |
|  |  **OR** |  |  |  |
| **14(b)** | Mr. X receives cash inflows of ₹1,500, ₹2,000, ₹1,200, ₹1,600, and ₹800 at the end of year 1, 2, 3, 4, and 5, respectively. If the discount rate is 9%, calculate the Net Present Value (NPV) of the cash flows. Initial Investment is Rs.9000. | **7 Marks** | **CO4** | **Application** |
| **15(a)** | State the meaning of national income. What are the methods of calculating national income? | **7 Marks** | **CO5** | **Understand** |
|  |  **OR** |  |  |  |
| **15(b)** | Explain the different concepts of national income. | **7 Marks** | **C05** | **Understand** |

**Part C**

**Answer Any THREE Questions. Each question carries 15 marks.
*(3 X 15 Marks = 45 Marks)***

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| **SL NO.** |  **QUESTION** | **MARKS** | **CO** | **BLOOM'S LEVEL** |
| **16** | Discuss the circular flow of income in a four sector economy and its relevance in understanding economic systems. | **15 Marks** | **CO1** | **Understand** |
| **17** | A project requires an initial investment of ₹2,00,000. The expected cash inflows over the next four years are as follows: * Year 1: ₹60,000
* Year 2: ₹70,000
* Year 3: ₹80,000
* Year 4: ₹90,000

Calculate:(a) Payback Period (b) Net Present Value (NPV) at a discount rate of 10%.  | **15 Marks** | **CO4** | **Application** |
| **18** | A firm is considering an investment worth ₹1,20,000. The CFATs (Cash Flows After Tax) for the next five years are ₹30,000, ₹35,000, ₹40,000, ₹25,000, and ₹20,000, respectively. If the cost of capital is 9%, determine whether the project is worthwhile using IRR model. Use trial rates 8% and 12%. | **15 Marks** | **CO4** | **Application** |
| **19** | Give a detailed explanation on fiscal policy and monetary policy. Also distinguish fiscal policy and monetary policy. | **15 Marks** | **CO5** | **Understand**  |