

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-IV (NEW) EXAMINATION – WINTER 2024****Subject Code:3144201****Date:29-11-2024****Subject Name: Engineering Economics****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define the flow of goods and services in an economy.	03
	(b) Describe the law of supply and demand.	04
	(c) Define the types of costs: fixed, variable, marginal, and average.	07
Q.2	(a) Define the present worth method and future worth method.	03
	(b) Discuss the importance of the rate of return method in investments.	04
	(c) Compare sensitivity analysis with break-even analysis.	07
	OR	
	(c) Explain Break-even analysis and its relevance in cash flow analysis.	07
Q.3	(a) List the different types of price indexes.	03
	(b) Compare CPI and PPI price indexes.	04
	(c) Discuss causes of inflation and provide examples.	07
	OR	
Q.3	(a) Describe how price indexes are used in engineering economic analysis.	03
	(b) Explain the annual equivalent method for comparing cash flow alternatives.	04
	(c) Perform a sensitivity analysis using the V ratio for a project.	07
Q.4	(a) How is the economic life of an asset determined?	03
	(b) Compare future worth analysis with present worth analysis.	04
	(c) Apply capital recovery with return to asset replacement decisions.	07
	OR	
Q.4	(a) List the six types of replacement problems.	03
	(b) Compare different types of maintenance in engineering.	04
	(c) Assess economic feasibility of a renewable energy project using worth analysis.	07
Q.5	(a) List the different methods of depreciation.	03
	(b) List the key ESG factors considered in business evaluations.	04
	(c) Compare CSR and ESG in terms of their goals and implementation.	07
	OR	
Q.5	(a) Define CSR and explain its importance in business.	03
	(b) Discuss the pros and cons of each depreciation method.	04
	(c) Evaluate the impact of CSR initiatives on a company's reputation with examples.	07
