



**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF MANAGEMENT

MAKE UP EXAMINATION -JAN 2023

Course Code: MGT 112

Course Name: ENGINEERING ECONOMICS

Program : B.TEH

Date: 23-JAN-2023

Time: 01:00 PM – 04:00 PM

Max Marks: 100

Weightage: 50 %

Instructions:

(i) Read all questions carefully and answer accordingly.

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries FOUR marks.

(5Qx 4M= 20M)

1. Define Price Elasticity of demand (C.O.No.2)[Knowledge]
2. Explain the circular flow of income using suitable diagram (C.O.No.1)[Knowledge]
3. Define IRR, Payback period, Depreciation, Future value of money (C.O.No.4)[Knowledge]
4. List out the different steps in Rational Decision making process (C.O.No.1)[Knowledge]
5. Mention different types of costs involved in production (C.O.No.4)[Knowledge]

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries EIGHT marks.

(5Qx8M=40M)

6. Engineers must understand how their investment decisions affect overall position of the Company and its future growth and prospectus. In this context explain the principles of Engineering Economics. (C.O.No.1)[Comprehension]
7. Demand is the quantity of a product that consumers are willing and able to purchase at various Prices during a given period of time. Based on the price and quantity demanded, give reasons and show graphically what will happen in each case?
 - i.) Consider that Generator and diesel are compliments. What will happen to the demand of Diesel, if the price of generator increases.
 - ii) Assume that Cello is a normal good. What will happen to the demand of Cello, if the income of people who buy Cello decreases? (C.O.No.2)[Comprehension]
8. The intersection of the demand and supply functions is called point of market equilibrium. if the demand and supply are given by: $Q_d=1000-20P$ and $Q_s=400P-200$. Calculate Equilibrium Quantity and Equilibrium Price. (C.O.No.3)[Comprehension]

9. Cost analysis is an important technique in production of goods decisions. Fill up the blanks in the following table. (C.O.No.4)[Comprehension]

UNITS OF OUTPUT	Total Fixed Cost (TFC)	Total Variable Cost (TVC)	Total Cost (TC)	Average Fixed Cost (AFC)	Average Variable Cost (AVC)	Average Cost (AC)	Marginal Cost (MC)
20	1,500		1700		10	85	000
50	1,500	500		30			300
100	1,500	900					400
200	1,500	1,500	3,000				

10. if you deposit Rs.3000 in an account that pays 10% interest, compounded annually, how much will You have at the end of 1year? 2 years? 3 years?

Part C [Problem Solving Questions]

Answer all the Questions. Each question carries TEN marks.

(4Qx10M=40M)

11. Impala Engineering are producing a small component and they provide the following data:
 Selling Price per unit Rs.40
 Variable Cost per unit Rs.24
 Fixed Cost Rs.16,000
 You are required to calculate Break Even Point (BEP) in physical units, Variable Cost at BEP and Profit made by the company at 5000 units (C.O.No.3)[Application]
- 12.(a) if the price of pens decreases from Rs.2 to Rs.1 and the quantity demanded for pen increases from 40 to 50 units, Calculate the price elasticity of demand and comment on the nature of Elasticity.
 (b) If the income increases from Rs.1000 to Rs.2000 and the quantity demand for the product Increases by 20 to 30 units, Calculate the income elasticity and comment on the nature of Good. (C.O.No.4)[Application]
13. Zenith Engineering consultants are planning to invest Rs.2,00,000 in each project. Calculate Pay back period and suggest them which project is preferable (C.O.No.4)[Application]

YEAR	PROJECT 'A' CASH FLOWS (Rs.)	PROJECT 'B' CASH FLOWS (Rs.)	PROJECT 'C' CASH FLOWS (Rs.)
1	90,000	1,30,000	1,66,667
2	90,000	1,30,000	1,66,667
3	90,000	1,30,000	76,667
4	90,000	80,000	80,000
5	2,30,000	60,000	90,000

14. Solve for the missing value and complete the following: (C.O.No.4)[Application]

CASE	FUTURE VALUE	INTEREST RATE	NUMBER OF YEARS	PRESENT VALUE
A	Rs. 8,000	5%	5	
B		10%	20	Rs.68,650