

**Fourth Semester Examination – 2011**  
**ENGINEERING ECONOMICS AND COSTING**

**Full Marks – 70**

**Time : 3 Hours**

*Answer Question No. 1 which is compulsory and any **five** from the rest.*

*The figures in the right-hand margin indicate marks.*

1. Answer the following questions in brief : 2×10
- (a) Explain the features of a planned economy ?
  - (b) What are the major problems in an economy ?
  - (c) Explain the reason why people buy less when price of inferior goods falls.
  - (d) What do you mean by internal economics ?
  - (e) In a perfect competition, can a seller change any price he likes ? Justify your answer.
  - (f) Why is RBI called controller of credit in India ?
  - (g) What is a money market ?
  - (h) What is a cost sheet ? What are its utilities ?
  - (i) What do you mean by agency services of a commercial banks ?
  - (j) What is meant by overheads ? Classify overheads.

2. Suppose a firm is operating under a perfectly competitive conditions in the market in the short run. It has the following revenue and cost condition :

$$TR = 12Q$$

$$TC = 2 + 4Q + Q^2$$

TR = Total Revenue and TC = Total Cost

Q = Quantity

3. A company must decide whether to buy machine A or machine B : 10

	<b>Machine A</b>	<b>Machine B</b>
Initial cost	Rs.4,00,000	Rs.8,00,000
Useful life, in years	5	5
Salvage value at the end of machine life	Rs.2,00,000	Rs.5,50,000
Annual maintenance cost	Rs. 40,000	0

At 12% interest rate, which machine should be selected ? (Use future worth method of comparison).

$$i = 12\%$$

n	F/P	P/F	F/A	A/F	P/A	A/P	A/G
5	1.762	0.5674	6.3530	0.1574	3.6048	0.2774	1.7746

4. Govt. of Orissa is contemplating to construct a dam over river Mahanadi. List out the social costs and benefits out of this project. How would you evaluate such a proposal? 10
5. Define a Central Bank. Describe the main functions of a Central Bank. 10
6. The following costs and sales of a manufacturing company for the first half and second half of 2005-06 are given : 10

	First half	Second half
	Rs.	Rs.
Sales	24,00,000	30,00,000
Total costs	21,80,000	26,00,000

You are asked to determine :

- Contribution / Sales ratio of the firm
- Annual fixed costs
- Break-even point
- Margin of safety as percentage of sales.

7. ✓ (a) Explain the concept of elasticity of demand. 5
- (b) What are the factors governing price-elasticity of demand? 5
8. ✓ Explain the concept of production and the law of variable proportions. 10

POWER OF KNOWLEDGE