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Total number of printed pages – 2

B. Tech  
HSSM 3204

**Third Semester Examination – 2013**

**ENGINEERING ECONOMICS AND COSTING**

BRANCH : ENV, CSE, IT, MECH, MARINE, MINERAL, MINING, AUTO, MM,  
MANUFACT, EIE, F AT, MANUTECH, MME, CHEM, BIOMED, TEXTILE, AEIE, IEE,  
ICE, BIOTECH, PLASTIC, ELECTRICAL, EEE, FASHION, CIVIL, EC, ETC

**QUESTION CODE : C-485**

**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 : 2×10
- (a) Why does the problem of scarcity exist and what does it mean ?
  - (b) What does the expression "There is no such thing as a free lunch" mean ?
  - (c) What is true of marginal cost when marginal returns are increasing ?
  - (d) Why do economists emphasize the importance of equilibrium in markets ?
  - (e) What is continuous compounding ?
  - (f) What do you mean by "Equal payment series sinking fund" ?
  - (g) What is the significance of Payback period method ?
  - (h) Why is the study of depreciation significant ?
  - (i) What is the usefulness of break-even analysis ?
  - (j) What are the primary functions of Commercial banks ?
2. (a) Why do we study consumer demand theory, given that our main interest in Engineering economics is the demand that a Firm faces for its product ? 5
- (b) Why is the demand for durable goods less stable than the demand for nondurable goods ? 5

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3. Samsung Electronics at Bapuji Nagar has the following demand function for its 165 liter refrigerator :  
 $P = 5000 - 2Q$ . With the help of this function find
- (a) The marginal revenue function
- (b) The price and quantity at which the total revenue will be maximized. 10
4. (a) A Firm purchases ball bearings at Rs.12. Its monthly requirements is 1000 units. If it decides to make, its fixed cost would be Rs.18,000 and variable cost Rs.5 per unit. What is your advice ? 5
- (b) A Small firm incurs fixed expenses amounting to Rs.12,000. Its variable cost of product X is Rs.5 per unit. Its selling price is Rs.8. Determine its BEQ and Safety margin for the sales of 5000 units. 5
5. Prepare Cost sheet from the following data : 10
- Direct labor Rs.60,000
- Raw materials consumed Rs.1,50,000
- Factory overhead 10% of the raw material consumed
- Administrative overhead 20% of the works cost
- Selling overhead Rs.0.60 per unit
- Units produced 5,00,000 units
- Units sold 14,00,000 @ Rs.1.00 per unit.
6. What is Depreciation ? What are the causes of depreciation ? Why is there a need for charging depreciation ? 10
7. Discuss the Present worth and Future worth methods of evaluating engineering alternatives. 10
8. Discuss the credit control mechanism followed by RBI. 10

