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Total Number of Pages: 02

B.TECH
HSSM3204

3rd Semester Regular / Back Examination 2015-16
ENGINEERING ECONOMICS AND COSTING

BRANCH: ALL

Time: 3 Hours

Max marks: 70

Q.CODE: T268/T269

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

- Q1 Answer the following questions: (2 x 10)**
- a) State two reasons for the calculation of time value of money?
 - b) What is 'net present worth'?
 - c) Define Production function.
 - d) What are the factors influence supplies?
 - e) Why is RBI called controller of credit in India?
 - f) What is the difference in Law of Variable Proportions and Laws of Returns to Scale?
 - g) Explain with examples the concept of opportunity cost.
 - h) What is amortization?
 - i) What is meant by overheads? Classify overheads and give two examples in each.
 - j) Draw a graphical picture showing the various components for making break-even analysis.
- Q2 a) A sum of money amounting Rs 2000 is invested at the beginning of year 1 at 8% for one year. Show the interest earned, future value and effective annual interest rate if compounding takes place annually, bi-annually, quarterly and monthly. Comment on the results (10)**
- Q3 a) Explain the concept of elasticity of demand? (5)**
b) What are the factors governing price-elasticity of demand? (5)
- Q4 a) What is depreciation? Distinguish between decline balance and straight-line method of depreciation. (5)**
b) What are the techniques followed by Commercial banks for loans and advances? (5)

Q5 Utkal Ltd provides the following data for the year ended 31st March, 2014: **(10)**

Selling Price per unit : Rs 10
 Production and Sales : 400 units
 Variable Cost per unit : Rs 5
 Fixed Cost : Rs 1,000

You are required to show the impact of the following actions on P/V Ratio, Break-Even Point and Margin of Safety

- a) The variable cost increases to Rs 6 per unit
- b) The fixed cost increases to Rs 1500.
- c) The selling price increases to Rs 20 per unit.

Q6 A company has to select one of the following projects: **(10)**

	Project - A	Project - B
Cost	11,000	10,000
Cash Inflows		
Year 1	6,000	1,000
Year 2	2,000	1,000
Year 3	1,000	2,000
Year 4	5,000	10,000

Using the *Internal Rate of Return* method suggests which project is preferable.

Q7 An Engineer has proposed the construction of a pedestrian bridge **(10)**

over a park way to secure safe constructing and eliminate accident. The cost of constructing the bridge is estimated at Rs.10, 00,000 for a useful life of 10 years and maintenance cost of Rs.50, 000 at the end of 5th year and Rs.75,000 at the end of 8th year. If the bridge is built, the annual premium of the Towns liability insurance will be reduced by Rs.15,000 the first year plus Rs.5,000 each year thereafter(i.e. the second year's reduction will be Rs.20,000,the third year's Rs.25,000 and soon).The Township uses a discount rate of 8%. Determine the benefit-cost ratio of the proposal and comment.

Q8 **Write short notes on any two:** **(5 x 2)**

- a) Fixed Cost Vs variable cost
- b) Perfect Competition
- c) Monopoly of Note Issue
- d) Cost Sheet