

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Fifth Semester B.E. Degree Examination, Dec.2013/Jan.2014**  
**Engineering Economics**

Time: 3 hrs.

Max. Marks:100

**Note: 1. Answer FIVE full questions, selecting at least TWO questions from each part.**  
**2. Use of discrete interest tables is permitted.**

**PART – A**

- 1 a. Describe the problem solving process in decision making. (08 Marks)  
 b. Explain the law of returns. (06 Marks)  
 c. Explain the earning power of money from lenders view point and borrower's view point. (06 Marks)
- 2 a. Briefly state and explain the conditions for present worth comparisons. Also state present worth by the "72 rule". (10 Marks)  
 b. A bakery is thinking of purchasing a small delivery truck that has a cost of ₹ 1,80,000 and is kept in service for 6 years, at which time the salvage value is expected to be ₹ 25,000. Maintenance and operating costs are estimated at ₹ 25,000 the first year and will increase at a rate of ₹ 200 per year. Determine the present worth of this vehicle, using an interest rate of 12%. (10 Marks)
- 3 a. Briefly explain the following terms as applied to asset life:  
 (i) Service life                      (ii) Accounting life                      (iii) Economic life. (06 Marks)  
 b. Explain equivalent annual cost method by sinking fund. (04 Marks)  
 c. The following data have been estimated for two feasible investments, A and B, for which revenues as well as costs are known and which have different lives. If the minimum attractive rate of return is 10%, show which feasible alternative is more desirable by using equivalent annual worth method. Use the repeatability assumption. (10 Marks)

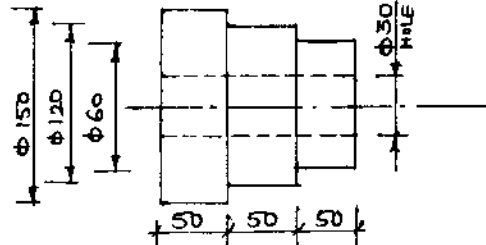
	A	B
Investment (First) cost	₹ 3,500	₹ 5,000
Annual Revenue	₹ 1,900	₹ 2,500
Annual cost	₹ 645	₹ 1,383
Useful life	4 years	8 years
Salvage value at the end of useful life	0	0

- 4 a. Explain in brief the 3 types of Rate of return. (06 Marks)  
 b. What is depreciation? What are the causes of depreciation? (06 Marks)  
 c. A CNC machine costing ₹ 22,00,000/- is estimated to serve 5 years after which, its salvage value is estimated to be ₹ 2,00,000/- Find the  
 (i) Depreciation during third year by fixed percentage method.  
 (ii) Book value of the machine after two years by sum of year digits method. (08 Marks)

**PART – B**

- 5 a. Explain the importance of Estimating and Costing. (04 Marks)  
 b. The market price of a lathe is ₹ 50,000 and the discount allowed to the distributor is 20% of the market price. It is found that the selling expenses cost is  $\frac{1}{4}$ <sup>th</sup> of the factory cost and if the material cost, labour cost and factory overhead charges are in the ratio of 1:3:2. What profit is made by the factory on each lathe, if the material cost is ₹ 5,000. Neglect other overheads. (08 Marks)

- c. A cart form stepped pulley is shown in Fig.Q5(c). Taking density of cast iron as 7.0208 gm/cc. Calculate unit weight of the component. Also what is the cost of material, if cost per kg is ₹ 15? (08 Marks)



All dimensions are in mm  
Fig.Q5(c)

- 6 a. What is Book keeping? What are the objectives of Book keeping? (05 Marks)  
b. Explain : (i) Journal (ii) Ledger (05 Marks)  
c. Following is the financial status of a company as on 31<sup>st</sup> March 2010.

Sundry Debtors	10,000
Cash in Hand	22,000
Bank loans	40,000
Bill payable	20,000
Equity shares	1,13,000
Land & Building	50,000
Plant & Machinery	90,000
Inventories	15,000
Creditors	30,000
Bank Balance	16,000

Prepare a balance sheet as on 31<sup>st</sup> March 2010. (10 Marks)

- 7 a. Briefly explain : (i) Liquidity ratio (ii) Profitability ratio (06 Marks)  
b. What are the limitations of ratio analysis? (04 Marks)  
c. A company has the following data:  
Current ratio = 2.5 : 1  
Acid test ratio = 1.5 : 1  
Current liabilities = ₹ 50,000  
Find : (i) Current Assets (ii) Liquid Assets (iii) Inventory (iv) Working capital. (10 Marks)

- 8 a. Briefly explain the objectives of profit planning. (05 Marks)  
b. Define Budget and give a brief classification of Budget. (05 Marks)  
c. Write short notes on any two :  
(i) Master Budget  
(ii) Dangers of Budgeting  
(iii) Production Budget (10 Marks)

\* \* \* \* \*