VEER SURENDRA SAI UNIVERSITY OF TECHONOLOGY, BULRLA

B.TECH THIRD MID. SEMESTER EXAMINATION 2015

ENGINEERING ECONOMICS AND COSTING

(Mechanical, Electrical, Production Engg, Metal & Metallurgy, Electrical & Electronics)

Maximum Mark: 20 *Time: Two Hours*

(GROUP-A IS COMPULSORY)

(ANSWER ANY THREE QUESTIONS FROM GROUP-B)

GROUP-A (1 Marks x5)

Q1.

(a). What do you mean by Salvage value of an asset?

(b). What do you mean by Annuity?

(c). What is Irregular Cash Flow?

(d). Explain Economic Life of an asset

(e). What is Sinking fund factor?

GROUP-B (2½ + 2½=5 Marks x3)

(ANSWER ANY THREE QUESTIONS)

Q2.

(a). What are the uses of a Cash Flow Diagram?

(b). At what percentage of Interest Rs. 275/- will be Rs. 750/- in 20 years.

Q3.

(a). Why Money has time value in Engineering Economics?

(b). A Bank gives a Loan to a Company to purchase an equipment worth of Rs. 10,000/- at an Interest Rate of 18% compounded annually. This amount should be repaid in 15 years equal installment. Find the annual installment amounts that the Company has to pay the Bank.

Q4.

(a). State the different conditions for present worth comparison of Engineering alternatives.

(b). Compare two alternative A_1 and A_2 by incremental future worth method. The rate of interest is 10% compounded annually

Year	A_1 Cash Flow in Rs.	A_2 Cash Flow in Rs.
0	-10,000	-15,000
1	5,000	7,000
2	5,000	7,000
3	5,000	7,000

Q5.

(a). Distinguish between Nominal Interest Rate and Effective Interest Rate?

(b). An assets is available to perform a necessary function for three years. The initial cost of the assets at time and subsequent annual returns are shown in the table. The annual compound rate of Interest is 8%. Find present worth of the asset.

Asset	Initial Cost '0'	1st Yr.	2nd Yr.	3rd Yr.
Asset X	14,500/-	6,000/-	6,000/-	8,000/-

Q6.

(a). Distinguish between Simple Interest rate and Compound Interest Rate.

(b). A person is planning for his retired life. He has ten more years of service. He would like to deposi 4,000/- at the end of the first year in nationalized bank and there after wishes to deposit an amount wi annual increase of Rs. 500/- for next nine years with an interest of 15%. Find out the total amount he receive at the end of the 10th year.

B.Tech-3
EEC

ENGINEERING ECONOMICS AND COSTING

Full marks: 70
Time: 3 hours

Answer any SIX questions including **Q. No. 1** which is compulsory
The figures in the right-hand margin indicate marks

1. Answer the following: [2x10]

(a) What do you mean by nominal interest rate?
(b) What is meant by cost benefit analysis?
(c) Discuss any two causes of charging depreciation.
(d) What is relevant cost?
(e) What do you understand by compound interest?
(f) Give two objects of sensitivity analysis.
(g) What is IRR?
(h) Define cost reduction.
(i) What is the present value of an uneven series of cash flows?
(j) What do you mean by variable cost?

2. (a) What do you mean by cash flow diagrams? [5]
(b) If an interest on a certain sum for 3 months is Rs. 63.87 at 5% simple interest, what would it be at 6%? [5]

3. What factors are taken into consideration for estimating the life of an asset? Discuss with examples, the comparison of assets with equal and unequal lives. [5]

4. (a) What are the limitations of Break-even analysis? [5]
(b) The following information is obtained from ABC Co. for 2014.
Sales: Rs. 20,000; Variable cost: Rs. 10,000; Fixed cost: Rs. 6,000.
Find (a) Break-even point; (b) P/V Ratio. [5]

5. (a) Identify the costs in cost-benefit analysis. [5]
(b) Enumerate the steps in the cost-effectiveness analysis. [5]

6. (a) Distinguish between single-parameter sensitivity and multiple-parameter sensitivities. [5]
(b) Discuss the declining balance method of depreciation. [5]

7. (a) A person wishes to have future sum of Rs. 1,00,000 for his daughter's education in a professional course after 10 years from now. What is the single payment that he should deposit now so that he gets the desired sum after 10 years? The bank gives 10% interest rate compounded annually. [5]
(b) What is the present worth method of evaluating a single project? [5]

8. (a) Prepare a cost sheet with imaginary figures. [5]
(b) Write a note on Standard Costing. [5]