(Set-1)

B.Tech - 4th

Engineering Economics and Costing

Full Marks : 70

Time : 3 hours

Q. No. 1 is compulsory and answer any
five from the rest

The figures in the right-hand margin indicate marks

1. Answer *all* the questions :   2 × 10

    (a) Define Time Value of money.

    (b) What is Time Value equivalence ?

    (c) What is the difference between Nominal
    interest and effective interest rate ?

    (d) What is Break-Even Point ?

    (e) What is meant by annuity ?

    (f) What do you mean by Depreciation ?

(*Turn Over*)

(2)

(g) What is 'Period cost' ?

(h) What do you mean by salvage value ?

(i) What is Sinking fund ?

(j) What is P/V ratio ?

2. (a) Briefly discuss the various methods of comparison of assets.　　5

(b) A sum of ₹ 5,000 is invested for a period of one year at an interest of 8% per annum. Find the effective rate of interest when the compounding take place (i) biannually, (ii) quarterly.　　5

3. (a) What will be the present worth of future cost of ₹ 2,00,000, five years from now, at an interest rate of 10 % per year ?　　5

(b) What is the significance of continuous compounding in engineering economic analysis ?　　5

(3)

4. (a) When is it appropriate to compare assets according to their Future Worth ? Give illustrations.　　5

(b) An investment of ₹ 66,000 on a project generates incomes of ₹ 20,000, ₹ 18,000, ₹ 12,000, ₹ 10,000, ₹ 7,000 and ₹ 5,000 during the next six years. Find out the project's Pay Back period.　　5

5. (a) Discuss the method of evaluating a public project. Explain, with suitable examples.　　5

(b) Elaborate the differences between Net Present Value method and Internal Rate of Return method of ranking alternative projects.　　5

6. (a) Discuss the various, alternative methods of computing Depreciation charges. What is the most appropriate method when it is intended for a cash provision for the replacement of the asset at the end of its expected life ?　　5

(b) A vehicle purchased for ₹ 50,000 has an estimated life of ten years after which its scrap value is ₹ 10,000. Calculate the depreciation rate as per the Declining Balance method. 5

7. (a) Distinguish between Absorption costing and Marginal costing. 5

(b) A firm has a fixed cost of production of ₹ 12,000. If the selling Price of its product is ₹ 5 while the marginal cost is ₹3, how many units should the firm produce in order to break even ? What will be the new break even point if its marginal cost reduces to one-third the earlier cost ? 5

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