

Total number of printed pages



B. Tech/B. Pharm

HSSM 4201/PH. 3.10

2<sup>nd</sup> YEAR SUPPLEMENTARY EXAMINATION – 2006

## ENGINEERING ECONOMICS AND COSTING

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any five questions from the remaining.*

*The figures in the right-hand margin indicate marks.*

1. Answer the following questions : 2×10
  - (a) State the general formula for the future value of a single cash flow.
  - (b) What is 'pay-back period' ?

P.T.O.

- (c) When the interest is said to be compound ?
- (d) What is 'co-termination' ?
- (e) Define ROI.
- (f) State two objectives of charging depreciation.
- (g) What do you mean by weighted cost of capital ?
- (h) What is P/V ratio ?
- (i) What do you mean by joint products in process costing ?
- (j) What is labour cost variance ?

2. Mr. Patro has made an arrangement to borrow Rs. 1,000 now and another Rs. 1,000 two years hence. The entire obligation is to be repaid at the end of four years. If the projected interest rates in years one, two, three and four are 10%, 12%, 12% and 14% respectively, how much will be paid as a lump-sum amount at the end of four years ? 10

3. State the importance of "equivalent annual worth comparison". Discuss with examples, the comparison of assets of equal and unequal life. 10
4. Differentiate between net present value and internal rate of return. Evaluate a project with imaginary figures by the help of the above two methods. 10
5. Raj Ltd. manufactures three products – X, Y and Z. The unit selling prices of these products are Rs. 100, Rs. 160 and Rs. 75 respectively. The corresponding unit variable costs are Rs. 50, Rs. 80 and Rs. 30. The proportions (quantity-wise) in which these products are manufactured and sold are 20%, 30% and 50% respectively. The total fixed costs are Rs. 14,80,000. Calculate overall break-even quantity and the product-wise break-up of such quantity. 10
6. State the causes of depreciation. Discuss two important methods of charging depreciation with examples. 10



7. The standard mix of a product is :

<u>Raw materials</u>	<u>Units</u>	<u>Price</u> Rs.
E	6	2.50
F	4	5.00

During a period, 3 mixes were processed and the actuals were as follows :

<u>Raw materials</u>	<u>Units</u>	<u>Price</u> Rs.
E	16	2.50
F	14	6.00

Calculate material variances.

10

8. Write notes on :

5×2

- (a) Cost reduction
- (b) Process losses.