Special Examination – 2012
ENGINEERING ECONOMICS AND COSTING (OLD COURSE)
Full Marks – 70
Time : 3 Hours

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

1. Answer the following questions :   2×10
   (a)   What do you mean by 'semi-annual compounding'?

   (b)   What are flat rates of interest?

   (c) · State two limitations of net present worth method.

   (d)   Explain project indivisibility.

   (e)   What do you mean by secondary cost of a project?

   (f)   What do you mean by 'economic service life'?

   (g)   Explain depletion?

   (h)   What is margin of safety?

   (i)   What is material cost variance?

   (j)   What are the objectives of process costing.

2. (a)   Mr X want to make a deposit planning in a bank for a period of 10 years. He would
         like to deposit Rs. 7,500 at the end of first year and there after he wants to deposit the
         amount with an annual decrease of Rs. 500 for the next 9 years with an interest rate
         of 12%. Find the total amount to receive at the end of the 10th year of the above plan.
                                                                                 5
   (b)   Explain the conditions for present worth comparison and discuss net present worth.
                                                                                 5

3. One Company purchased a pump and motor for Rs. 3,875 installed. But it was found that
   the pump had been improperly selected and the power bill for operating the pump would be
   Rs. 1500 per year. A new pump, which is suitable for the requirement, is available for Rs.
   5100 installed, with a guarantee that the power cost will not exceed Rs. 900 annually.
   Assume an 8 years study period with zero salvage for both pump sets at the end of the
   period. The firm uses a minimum alternative rate of return of 12%. Should the pump be
   replaced?   10

4. You are required to select one project from two mutually exclusive alternatives. Discuss
   the process of selection based on the future worth method of comparison by assuming
   suitable figures as regards to their cost, uniform annual benefit, useful life in years and
   interest rate.   .   10

5. At 6% rise in price of a product leads to 20 percent fall in its demand. A consumer buys 100 units of the product at a price of Rs 12 per unit How many units will the consumer buy when price changes to Rs 14?   10

6. The following figures are available for the records of Utkal Ltd. as at 31st March :

	2011	2012
	Rs. (in lakhs)	Rs. (in lakhs)
Sales	150	200
Profit	30	50

    Calculate :   5×2
    (a)   the P/V ratio and total fixed cost.
    (b)   the break-even level of sales.

7. (a) Discuss the different factors responsible for causing   5
    (b) Explain various methods for breakeven analysis   5

8. Write short notes on :   5×2
    (a)   Cost reduction
    (b)   Relevant cost.