

A 209

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Seventh Semester

Chemical Engineering

CH 431 — PROCESS ECONOMICS AND INDUSTRIAL MANAGEMENT

(Common to Leather Technology, Polymer Technology, Textile Chemistry and Textile Technology)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Planning.
2. List any 4 characteristics of organization.
3. Define therblig.
4. Define EOQ.
5. Differentiate variable V, Attribute in quality control.
6. What are the cost components of any product?
7. What are the factors considered for replacing equipments?
8. Mention any two uses of forecasting sales.
9. Define economics.
10. Define Ratio Analysis.

PART B — (5 × 16 = 80 marks)

11. (i) Construct on chart for an process industry using the formal organization concept? (8)
- (ii) Explain the communication process in detail. (8)
12. (a) Describe the various work measurement techniques followed by industry with an example. (16)

Or

- (b) (i) Draw and explain the time study trainer? (8)
- (ii) Describe the principles of motion economy? (8)
13. (a) Show all the stages which occurs during the process of crude oil manufacturing with specific to process costing and compute the process costing for the two conditions.
- (i) With losses/gains (8)
- (ii) Without losses/gains. (8)

Or

- (b) (i) What is the need for control chart application in a process industry? (4)
- (ii) How will you statistically determine the \bar{X} & R chart in a process industry? (12)
14. (a) Define Depreciation. Describe the various methods of depreciation in detail. (16)

Or

- (b) (i) List out any six applications specific to Break-even analysis? (6)
- (ii) The following data are available for the existing equipment and for the proposed equipment to replace the existing one. Find whether the concern should go for replacement or not? (10)

Factors	Existing equipment	Proposed equipment
(1) Cost	Rs. 1,500 (market value)	Rs. 10,000 (installed cost)
(2) Operating expenses (annual)	Rs. 5,000	Rs. 3,888.9
(3) Scrap value	Rs. 500	Rs. 1,000
(4) Interest	10%	10%
(5) Life of equipment	1 year	9 years

(8) (a) (i) How will you prepare the trial balance in financial accounting? Explain. (10)

(8) (ii) What are the limitations of financial statements in financial accounting? (6)

Or

(8) (b) (i) List any four applications of cash flow analysis? (4)

(8) (ii) How will you prepare the balance sheet for a phosphate based company? (show all the details) (12)

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