

Total No. of Questions : 6]

SEAT No. :

P170

BE/Insem./APR-221

[Total No. of Pages : 1

B.E. (Chemical)

**409350 : PROCESS ENGINEERING COSTING & PLANT DESIGN
(2012 Course) (Semester - II)**

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.No. 1 or Q.No. 2, Q.No. 3 or Q.No. 4, Q.No. 5 or Q.No. 6.
- 2) Figures to the right indicate full marks.
- 3) Draw suitable diagrams wherever necessary.
- 4) Use of scientific pocket calculator is allowed.
- 5) Assume suitable data, if necessary.

Q1) Illustrate the concept of HAZOPS study and its importance in chemical plant with a neat piping and instrumentation diagram of storage tank. [10]

OR

Q2) Show a model specification sheet in one page for the following cases: [10]

- a) Heat Exchanger
- b) Sieve-tray Column

Q3) Write a note on following depreciation methods with appropriate derivations [10]

- a) Straight Line Method
- b) Declining balance or Fixed percentage method

OR

Q4) Explain the types of Taxes & Insurances in detail. [10]

Q5) Draw and explain the nature of graph for cumulative cash position showing the effects of cash flow with time for an industrial operations (neglecting time value of money) [10]

OR

Q6) Write a detail note on different types of cost indexes with their importance in cost estimation. [10]