

Total No. of Questions : 6]

SEAT No. :

P1421

[Total No. of Pages : 2

BE/ Insem/APR.- 236

B. E.

CHEMICAL

Process Engineering Costing & Plant Design

(2015 Course) (Semester - II) (409350)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Write Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.*
- 2) *Figures to the right indicate full marks.*
- 3) *Draw suitable diagrams wherever necessary.*
- 4) *Use of scientific calculators is allowed.*
- 5) *Assume suitable data if necessary.*

Q1) Enlist the factors affecting the selection of plant location and describe them in brief. **[10]**

OR

Q2) Illustrate the concept of HAZOPS study and it's importance in chemical plant with a neat piping and instrumentation diagram of storage tank. **[10]**

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) A machine is purchased for Rs. 100000 and the estimated life of 5 years with negligible scrap value. If the rate of interest on depreciable fund is 6 %, calculate the rate by straight line method, sum-of-the-years-digits method and sinking fund method. Also compare the results of three methods for five years in the table. **[10]**

P.T.O.

Q5) A company has three alternative investments, which are being considered. If incharge expects 15% rate of return original investment, which one is better?

[10]

Item	Investment 1	Investment 2	Investment 3
Initial Fixed capital (Rs.)	1,00,000	1, 70,000	2, 10,000
Working Capital Investment (Rs.)	10,000	10,000	15,000
Annual Cash flow (Rs.)	30,000	52,000	59,000
Annual Expenditure (Rs.)	15,000	28,000	21,000

OR

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

[10]

* * *