Total No. of Printed Pages:2

SUBJECT CODE NO:- H-258
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (Chemical) (Sem-II)
Elective-II: Computer Aided design and Optimization
[Revised]

[Time: Three Hours] **[Max.Marks: 80]**

Please check whether you have got the right question paper.

N.B
1) Q.No.1 and Q.No.6 are compulsory.
2) Solve any two from remaining in each section.
3) Assume suitable data wherever required.

Section A

Q.1 Solve following
a) Vapor pressure 03
b) Design of furnaces 04
c) Process variables 03

Q.2
a) Write down thermodynamic properties of gases & binary mixtures. 08
b) Describe vapor liquid equilibria. 07

Q.3 Write down design steps of following equipment's 15
1) Absorption column
2) Evaporator

Q.4
a) Describe process analysis. 07
b) Write down method of equipment selection. 08

Q.5 Write short note 15
1) Binary mixtures
2) Reactors
3) Process flow sheet

Section B

Q.6 Solve following
a) Nature of optimization problems 04
b) Constrained functions 03
c) Fluid flow systems 03

Q.7
a) Write down organization of optimization problems. 08
b) Write down formulation of objective functions. 07

Q.8
a) Write down basic concepts of optimization. 08
b) Explain optimization of unconstrained. 07

Q.9 a) Write down dynamic programming in detail. 08

b) Describe applications of optimizations in areas like heat transfer. 07

Q.10 Write short note 15

1) Optimization problems
2) Application of linear programming
3) Discrete processes