

Roll No :

**MECM-202**

**M.E./M.Tech. II Semester**

Examination, June 2016

**Computer Aided Design for Process Equipment**

*Time : Three Hours*

*Maximum Marks: 70*

- Note :** i) Attempt any five questions out of eight questions given.  
ii) Draw neat diagrams in support of your answers.  
iii) All questions carry equal marks.

1. a) Discuss general design consideration and optimum design in computer aided design.  
b) Give a brief note on property estimation, material and energy balance in computer aided design for process equipments. <http://www.rgpvonline.com>
2. a) Discuss important steps consider of computer aided design of heat transfer equipment.  
b) Discuss general design consideration in double heat exchangers shell and tube heat exchangers.
3. a) Give a brief note on design of distillation column.  
b) Give a brief note on design of absorption tower both plate as well as packed type.
4. a) Obtain an expression for the mean temperature difference for a counter flow heat exchanger.

- b) Discuss important design consideration of computer aided design of continuous stirred tank reactor.
5. a) Give a brief note on interactive computer graphics and drafting simulation software.
- b) Give a brief note on flow sheeting software and integrated software system. <http://www.rgpvonline.com>
6. a) Discuss special software for steady and dynamic simulation of chemical engineering systems.
- b) Discuss in brief development of software programs in computer aided design and process equipment.
7. a) Discuss important design consideration of computer aided design of chemical reactor.
- b) Discuss important design consideration of computer aided design of batch reactor.
8. a) Discuss important steps of computer aided design of mass transfer equipments.
- b) Discuss general design consideration in double heat exchangers condensers and evaporators.

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