

PY - 301

B.Pharm. III Semester

Examination, December 2012

Pharmaceutics - III

(Pharmaceutical Engineering-I)

Time : Three Hours

Maximum Marks : 70

*Note : a) This question paper contains EIGHT questions.
Attempt any FIVE*

b) All questions carry equal marks.

- 1) What are the factors to be considered during the selection of material for plant construction? What are special properties of steel to be used as material of construction and write its applications in pharmaceutical plant?
- 2) What is corrosion? Discuss the factors influencing rate of corrosion? Describe the role of oxygen in the corrosion of metals? Explain measures you suggest to check the problems of corrosion?
- 3) What are types of hazardous waste from bulk drug manufacturing? Explain in detail about the methods of treatment of such wastes.
- 4) Add notes on centrifugal pumps with proper diagram. Give its advantages and disadvantages.

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- 5) Explain the poiseuille's equation for flow of fluid through pipe. Explain the energy losses in fluid flow through pipe.
- 6) State and explain Stefan Boltzmann's law of heat transmission. Describe the 'overall heat transfer coefficient' and 'individual film coefficient'.
- 7) Explain the Carnot cycle of refrigeration. Describe the construction and working of refrigeration. Give its pharmaceutical applications.
- 8) Write short notes on (any three)
 - a) Automated process
 - b) Psychrometric chart
 - c) Valves
 - d) Fretting corrosion
 - e) Rotameter

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