

B.Pharm II Year I Semester (R15) Supplementary Examinations June 2017

**PHARMACEUTICAL ENGINEERING**

Time: 3 hours

Max. Marks: 70

**PART – A**  
(Compulsory Question)

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- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Give the Bernoulli's equation.
  - (b) What is corrosion? Mention its factors.
  - (c) What is wet bulb and adiabatic saturation temperature?
  - (d) Write the applications refrigeration and air-conditioning.
  - (e) What are the factors effecting filtration.
  - (f) Define crystallization and give the applications.
  - (g) Explain any one theory in size reduction.
  - (h) What is meant by vortex formation?
  - (i) Define automated process control system and give the examples.
  - (j) What is computer aided manufacturing?

**PART – B**  
(Answer all five units, 5 X 10 = 50 Marks)**UNIT – I**

- 2 Explain in detail about Pitot tube and Rotameter with neat labeled diagrams.
- OR**
- 3 Write short notes on Reciprocating pump and explain about the piston pump.

**UNIT – II**

- 4 Explain construction, working principle and theory of air conditioning.
- OR**
- 5 Explain thermodynamic method for measuring the humidity.

**UNIT – III**

- 6 Classify crystallizers and explain the working of Swenson – walker crystallizer. Give its advantages & disadvantages.

**OR**

- 7 Define centrifugation. Classify various equipments used for centrifugation process (explain any one centrifuge).

**UNIT – IV**

- 8 Explain in detail about equipments used in mixing of immiscible liquids.
- OR**
- 9 Explain construction, working principle involved in cyclone separator with neat labeled diagram.

**UNIT – V**

- 10 What is meant by computer aided manufacturing and explain the applications.
- OR**
- 11 Explain about process variables of temperature and pressure measurement.

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