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Code No. 1132/CBCS

### FACULTY OF PHARMACY

B. Pharmacy III–Semester (CBCS) (Main) Examination, January 2018

Subject: Pharmaceutical Engineering – I

Time: 3 Hours

Max. Marks: 70

Note: Answer all questions. All questions carry equal marks.

1. a) Write the advantages, disadvantages and applications of stainless steel as material of construction. (7)
- b) Classify different types of corrosion (7)
- OR**
- c) Explain the different factors affecting corrosion with the help of diagrams. (6)
- d) Explain the different methods of prevention of corrosion with the help of diagrams. (8)
2. a) Define conduction, convection, radiation, black body and gray body. (5)
- b) Derive the equation for the measurement of pressure by using simple manometer with help of diagram. (9)
- OR**
- c) Write the construction and working of Venturi meter and derive the equation for measurement of flow velocity (7)
- d) Write the various energy losses during the flow of fluids. (7)
3. a) Explain the concept check valves with help of diagram. (6)
- b) Explain the principle involved in the working of reciprocating pump with the help of diagram. (8)
- OR**
- c) Classify conveyors and write construction and working of belt conveyor. (6)
- d) Differentiate between fans, blowers and compressor with help of diagrams. (7)
4. a) What is humidity chart and explain the methods of determining humidity by using it. (7)
- b) Explain the stages in compression refrigeration cycle along with diagram. (7)
- OR**
- c) Write the mechanisms of dehumidification and humidification. (6)
- b) Explain the construction and working of air conditioner. (8)
5. a) Write the construction and working of continuous centrifuge with the help of diagram, and mention its applications. (7)
- b) Describe construction and working of De Laval Clarifier. (7)
- OR**
- c) Write the construction and working of perforated basket centrifuge with the help of diagrams, mention its applications and limitations. (6)
- d) Write the construction and working of plate and frame filter press with washing facility.

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