S4 B. Pharm Sem III (CBGS) March 2014

Ph. Engg.

QP Code : **BR-1944**

(3 Hours) [Total Marks : 70

N.B. (1) **All questions are compulsory.**
(2) **Begin new question on a new page.**

1. (a) Write a note on Bourdon gauge. 3
   (b) Describe mass transfer in turbulent flow. 3
   (c) Enlist the factors affecting caking of crystals. 2
   (d) Explain scale formation. 2
   (e) Explain boiling point diagram of an ideal binary system. 2
   (f) Discuss in brief about thermosetting plastics. 3

2. (a) Classify pumps. Write a note on Rotary pumps. 4
   (b) Explain construction and working of Swenson Walker crystallizer. 4
   (c) Explain distillation of immiscible liquids. 3

3. (a) Differentiate between Orifice and Venturimeter. 4
   (b) Explain condensers as evaporator accessories. 3
   (c) Discuss the components of an absorption type of refrigeration system. 4

4. (a) What is Reynolds experiment ? Give the significance of Reynolds number. 4
   (b) List the types of heat exchangers and write a note on any one tubular heat exchanger. 4

   OR

   (b) What are the different modes of heat transfer ? Write briefly on heat transfer through solids. 4
   (c) Discuss in brief Crystal Form and Crystal Habit. 3

5. (a) Discuss the working of centrifugal pumps. 3
   (b) Explain packed columns along with various packings. 4

   OR

   (b) Write in detail on construction and working of fractional distillation column. 4
   (c) Describe in detail fire hazards and the methods for prevention of fire hazards. 4

6. (a) What are conveyers ? Write a note on working of pneumatic conveyers. 3
   (b) Classify evaporators. Explain horizontal tube evaporator. 4
   (c) Define corrosion. Mention in detail any two factors affecting rate of corrosion. 4

   OR

   (c) Enlist methods of combating corrosion. Explain in brief sacrificial anode method to combat corrosion. 4
