Code No. 7208

FACULTY OF PHARMACY

B. Pharmacy II-Year I-Semester (Supplementary) Examination, November 2013
Subject : Pharmaceutical Engineering - I

Time : 3 Hours   Max. Marks: 70

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

1.(a)(i) Define Corrosion. Classify corrosion and explain about specific site corrosion and biological corrosion and combating methods of these corrosions. (10)
   (ii) Explain compositions, merits and demerits of stainless steel a material for plant construction. (4)

OR

   (b)(i) Differentiate steady and unsteady states. (4)
   (ii) Write about any four methods for prevention and control of corrosion. (8)

2.(a)(i) State Fourier's law and derive an equation for heat transfer through a cylinder. (7)
   (ii) Explain the principle, construction, working of orifice meter and derive an equation for difference in flow of fluids. (7)

OR

   (b)(i) Differentiate between heaters and heat interchangers. Write about the construction, working and advantages of floating - head double pass heater. (8)
   (ii) Give the equation for Reynolds number with units. (3)
   (iii) Define conduction, convection and Radiation with examples. (3)

3.(a)(i) Define conveying and explain about principle, construction, working , advantages and disadvantages of Belt conveyor. (9)
   (ii) Write short note on plug cock. (5)

OR

   (b)(i) Write about principle, construction, working , merits and demerits of screw conveyors. (8)
   (ii) Explain about peristatic pumps. (6)

4.(a)(i) Explain various types of refrigerants. (3)
   (ii) Explain the theory of refrigeration. (7)
   (iii) Write about the applications of Air conditioning. (4)

OR

   (b)   Define the following : (6)
       (i) Humidity   (ii) Dew point
       (iii) Dry bulb temperature   (iv) wet bulb temperature
   (c)   Explain the basic construction of a refrigeration cycle. (8)

5.(a)(i) What are ideal characters of filter media and explain about various types of materials used as filter media. (6)
   (ii) Write about the principle, construction, working and advantages of super centrifuge. (6)
   (iii) Give Poiseuille's equation with unit. (2)

OR

   (b)(i) Write a short note on filter aids. (4)
   (ii) Write about the principle, construction and advantages of meta filters. (7)
   (iii) Give Kozeny Carman equation with units. (3).

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