Code : 091201

B. Pharm. 2nd Semester Exam., 2018

PHARMACEUTICS—II

Time : 3 hours *Full Marks* : 70

Instructions :

(i) The marks are indicated in the right-hand margin.

(ii) There are ***NINE*** *questions in this paper.*

(iii) Attempt ***FIVE*** *questions in all.*

(iv) Question No ***1*** *is compulsory.*

1. Answer any *seven* of the following as directed : 2×7=14

(a) Define viscosity.

(b) What is Reynolds' number?

(c) Describe the function of filter aids.

(d) Define crystal habit.

(e) Give two examples of refrigerants.

(f) Define impingement.

(g) Define corrosion.

(h) What are isomorphs?

(i) What is the use of bunkers?

(j) Stainless steel is _____ resistant.
(Fill in the blank)

2. Answer the following questions : 7+7=14

(a) What will be the yield of $Na_2S_2O_3 \cdot 5H_2O$ if 500 kg of a 52% solution of $Na_2S_2O_3$ is cooled at 70 °F? (MM of $Na_2S_2O_3 \cdot 5H_2O = 248$ and MM of $Na_2S_2O_3 = 158$).

(b) What are refrigerants? Classify it. What are the expected conditions for the selection of the appropriate refrigerant?

3. Answer the following questions : 8+6=14

(a) What are unit operations? Describe the law of conservation of matter and the law of conservation of energy.

(b) Define the following terms :

(i) Caking

(ii) Tonne of refrigeration

(iii) Adiabatic saturation temperature.

4. Answer the following questions : 8+6=14

(a) Describe the theory of filtration and the factors influencing filtration.

(b) Write the principle, construction and working of rotary drum filter.

(Continued)

5. Write the theory of crystallization. Draw a neat labelled diagram of Swenson Walker crystallizer and discuss the construction, working, advantages and disadvantages. 14

6. Answer the following questions : 5+7+2=14

(a) Write on the wet-bulb temperature

(b) Describe the important features of humidity charts.

(c) Define dehumidification.

7. Answer the following questions : 7+7=14

(a) What are the chemical hazards? How can they be prevented?

(b) Discuss the principle and applications of refrigeration.

8. Write short notes on the following : 5+5+4=14

(a) Concept of boundary layer

(b) Conveyers and their applications

(c) Stainless steel as material in the construction of bulk plants

9. What are the various types of pumps? With the help of neat diagram, describe the working of piston pump. 14

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