

B.PHARM
(SEM-III) THEORY EXAMINATION 2019-20
PHARMACEUTICS-II (UNIT OPERATIONS)

Time: 3 Hours

Total Marks: 70

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief. 2 x 7 = 14

- a. Define primary and secondary quantities.
- b. Define filter aids with examples.
- c. What do you mean by fluidized state in drying?
- d. Define the term "fire triangle".
- e. Define steady and unsteady state with examples.
- f. What is the difference between bound water and unbound water?
- g. Define centrifugal force.

SECTION B

2. Attempt any three of the following: 7 x 3 = 21

- a. Write a note material balance and energy balance.
- b. How water for injection is prepared? Explain.
- c. Explain the principle and working of refrigeration.
- d. Define filtration. Explain different factors affecting filtration.
- e. Define hazards. Write a brief note on industrial dermatitis.

SECTION C

3. Attempt any one part of the following: 7 x 1 = 7

- (a) Explain the principle, construction, working and use of spray dryer.
- (b) Define corrosion? How can you combat the corrosion?

4. Attempt any one part of the following: 7 x 1 = 7

- (a) Explain the principle and working of central air conditioner.
- (b) Explain drying rate curve.

5. Attempt any one part of the following: 7 x 1 = 7

- (a) With a neat labeled diagram, explain the principle, construction, working and advantages of a rotary drum filter.
- (b) Discuss briefly the principle and working of super centrifuge.

6. Attempt any one part of the following: 7 x 1 = 7

- (a) Define automated process control system. Explain the equipments used for the measurement of pressure.
- (b) Discuss briefly different filter medias used in pharmaceutical industries.

7. Attempt any one part of the following: 7 x 1 = 7

- (a) Discuss in detail about specialized drying technique.
- (b) Write a brief note on pharmaceutical glasses.