Seat No: _____ **Enrollment No: _____**

PARUL UNIVERSITY

FACULTY OF PHARMACY

B.Pharm. Summer 2017-18 Examination

Semester: 2 **Date: 05/06/2018**
Subject Code: 08101152 **Time: 10.00 am to 1.00 pm**
Subject Name: Unit Operation-II **Total Marks: 75**

Instructions:
1. Figures to the right indicate full marks.
2. Make suitable assumptions wherever necessary.

Q.1 Essay type Questions. (Any 2 out of 3) (10 marks each) **(20)**

1. Discuss construction, working and applications of spray dryer.
2. Define filtration .write principle, construction, working, advantage, disadvanges and uses of rotary drum filter.
3. Explain Factors affecting evaporation in detail.

Q.2 Short Essay type Questions. (Any 7 out of 9) (5 marks each) **(35)**

1. What are the factors affecting the rate of filtration and explain all the factors in detail.
2. Discuss the theory of centrifugation process.
3. Give a short note on steam distillation.
4. Write about Mc-Cabe Thiele method for calculation of number of theoretical plates.
5. Write a note on Raoult's law.
6. Explain in detail psychometric charts.
7. Give the applications of distillation in pharmacy.
8. Classify the different type of evaporators. Explain with the help of a neat sketch the working of a film evaporator.
9. What do you mean by steam distillation? Explain with a neat sketch the working of the apparatus used for the distillation in a laboratory scale. Mention its application in pharmacy.

Q.3 Answer in short. (2 marks each) **(20)**

1. Give the applications of refrigerators in pharmacy
2. Define - Humid heat and Dry Bulb temperature.
3. Different between evaporation and distillation.
4. Give the difference between single effect and multi effect evaporators.
5. Write a short note on filter aid.
6. Define following:
   - Distillate
   - Condenser
   - Fractional distillation
   - Molecular distillation
7. Short note on tray dryer.
8. Explain Types of refrigeration cycles.
9. Explain phase diagram.
10. Define the term Humidity and Dew point.