



JP-014-1043007 Seat No. _____

**Master of Pharmacy Management (Sem. III)
(CBCS) Examination**

August / September – 2019

Pharmaceutical Engineering

Faculty Code : 014

Subject Code : 1043007

Time : 3 Hours]

[Total Marks : 75

Instructions :

- (1) Figure to the **right** indicates marks.
- (2) Draw neat and clean diagrams as required.

1 Answer the following questions : **10×2=20**

- (a) Write down the difference between heat interchanger and heat exchanger.
- (b) Define critical moisture content and equilibrium moisture content.
- (c) Define flash distillation and enlist its applications.
- (d) Define the term filter aid with examples.
- (e) Write down the difference between sedimentation and elutriation.
- (f) Write down the difference between drying and evaporation.
- (g) Enlist mode of stress applied in size reduction and explain any two.
- (h) Explain the term evaporator capacity. .
- (i) Explain the role of temperature on metal corrosion. .
- (j) Define Reynolds number. Write down its importance.

2 Answer any **two** out of the following : **2×10=20**

- (a) Explain in detail the mechanisms of drying process.
- (b) Explain in detail about steam distillation with industrial and laboratory scale equipment.
- (c) Derive Bernoulli's equation and write down its applications.

3 Answer any **seven** out of the following : **7×5=35**

- (a) Write down the Electrochemical theories of corrosion.
- (b) With a neat labeled diagram explain principle, construction, working, advantages and disadvantages of sigma blade mixture.
- (c) Describe in detail about the factors affecting evaporation.
- (d) Derive an equation for heat transfer by conduction through compound resistances in series.
- (e) Explain with the labeled diagram the construction and working of a ball mill.
- (f) Describe the construction and working of leaf filters.
- (g) Explain the theory of centrifugation.
- (h) With a neat labeled diagram explain principle, construction, working, advantages and disadvantages of silvers on emulsifier.
- (i) Explain various modes of motion in size separation.