

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0122]

**JANUARY 2022
(MARCH 2021 EXAM SESSION)**

Sub. Code: 2037

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER III

PAPER IV - PHARMACEUTICAL ENGINEERING

Q.P. Code: 562037

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Define Filtration. Write in detail about Plate and Frame filter press.
2. Explain about separation of mixture of components by fractional distillation using boiling point composition diagrams.
3. Define Evaporation. Discuss about climbing film evaporator.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Operational details of Ball mill.
2. Rotary drum filter.
3. Spray dryer.
4. Silverson – Mixer emulsifier.
5. Stainless steel as material of plant construction.
6. Cyclone separator.
7. Orificemeter.
8. Factors influencing corrosion.
9. Rotameter.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Define Elutriation.
2. Various grades of Powders.
3. Darcy's law.
4. Give suitable dryers for obtaining:
(i) Granular free flowing solids and (ii) Sticky pastes.
5. Factors affecting Evaporation.
6. Define Rectifying columns.
7. Mechanisms of Solid mixing.
8. Stefan-Boltzmann law.
9. Uses of Plastics.
10. Applications of Distillation.
