

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

[B.PHARM 0524]

**MAY 2024
(FEBRUARY 2024 EXAM SESSION)**

Sub. Code: 4256

**B.PHARMACY DEGREE COURSE (NON-SEMESTER EXAMINATIONS)
SECOND YEAR (Regulation 2009-2010)
PAPER I – PHYSICAL PHARMACEUTICS**

Q.P. Code: 564256

Time: Three hours

Answer ALL questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) What are Suspensions. Describe formulation of suspensions. Add note on theory of sedimentation.
b) Discuss about the hydrophilic-lipophilic balance scale and its applications.
2. a) Explain the objectives, methodology and limitations of accelerated stability testing.
b) pH titration method for analysis of complex.

II. Write notes on:

(8 x 5 = 40)

1. Factors affecting dissolution.
2. Give notes on settling of suspensions.
3. Mathematically derive first order reaction with examples.
4. Explain about the fundamental properties of powders.
5. Write the Noyes – Whitney equation with its importance.
6. What are the applications of rheology in pharmacy?
7. Give a brief account of inclusion complexes.
8. What are pharmaceutical buffers and write its applications.

III. Short answers on:

(10 x 2 = 20)

1. Define sedimentation volume.
2. What is Kraft point?
3. Define Fick's law.
4. List out the factors influencing flow properties of powders.
5. Define phase inversion.
6. What are polymorphism? Give examples.
7. CMC - Explain.
8. What is microemulsion?
9. Give examples for colloids.
10. What are isotonic solutions?
