

Time: Three Hours

Physical Pharmaceutics - II
Q.P. CODE: 5015

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
All the Questions are compulsory.

2 x 10 = 20 Marks

LONG ESSAYS

1. Derive the equation for the determination of rate constant, half life and shelf life for zero order reaction kinetics.
OR
Discuss electrical properties of colloids and add a note on purification of colloids.
2. Explain methods to determine particle size

7 x 5 = 35 Marks

SHORT ESSAYS

3. Note on measurement of thixotropy.
OR
Briefly explain the preventive measures for chemical degradation by hydrolysis.
4. Write the principle and working of cup and bob viscometer with a neat diagram.
OR
What are the factors affecting chemical degradation of pharmaceutical product?
5. Write a note on effect of electrolytes on colloids.
6. Write the principle and working of Andreason's pipette to determine the particle size with diagram.
7. Write a note on stability of emulsion.
8. Explain Newtonian system of flow of fluids with examples.
9. Define surface area. Discuss the air permeability method for determination of surface area.

SHORT ANSWERS

10 x 2 = 20 Marks

10. Write Arrhenius equation with its significance.
11. Define half life and shelf life.
12. Bulges and spurs.
13. Shear thinning and shear thickening system.
14. Void volume and porosity.
15. Angle of repose.
16. What is plug flow?
Electro-osmosis and Electrophoresis.
Coacervation.
Flocculated and deflocculated suspension.
