(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 150408

Roll No.

B. Pharm. (Semester-IV)

SPL. THEORY EXAMINATION, 2014-15

PHARMACEUTICS-IV

(PHYSICAL PHARMACY)

Time : 3 Hours]   *[Total Marks : 70*

Note: Attempt questions from all sections as per instructions.

SECTION – A

1. Note: Attempt any five parts of this section. Each question carries 2 marks: 2×5=10

   a. Define surface active agents.

   b. Define surface free energy.

   c. Define rate constant.

   d. What is surface tension?

e. Define Micromeritics.

f. Define Half-life of reaction.

SECTION – B

2. Note: Attempt any four parts of this section. Each part carries 5 marks: $5×4 = 20$

(a) Derive expression to calculate rate constant and half-life time for zero order reaction.

(b) Write short note on complex reaction.

(c) What is surface area and its methods of determination.

(d) What are buffers? Derive the buffer equation for a weak acid and its salt.

(e) How will you determine the shelf life of pharmaceutical products?

(f) Explain electrical properties of interface and its application.

SECTION – C

Note: Attempt any five questions from this section. Each part carries 8 marks: $8×5=40$

a) Define flocculation, flocculation in structured vehicles and its rheological conditions.

b) Discuss the accelerated stability studies and expiration date.

c) Write the note on factors affecting rate of reaction.

d) Define Newtonian systems, law of flow and factors affecting viscosity of formulation.

e) What are colloids? Types of colloids and application of colloids in pharmacy.

f) What are emulsions? What are theories of emulsions and physical stability of emulsions?

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