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Sum-18

गट - 024

T 2.4.1

**Pharmaceutics - IV (Physical Pharmacy - II)**  
**(2410) (Also Old Sem.- IV Equivalence) (T 241)**



P. Pages : 2

Time : Three Hours

Max. Marks

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Draw a well labelled diagram wherever necessary.

**SECTION - I**

1. Solve **any five** of the following.

10

- a) Enlist the method to determine order of reaction.
- b) What do you mean by plastic & pseudoplastic flow.
- c) What are bulges & spurs.
- d) Define half life & shelf life.
- e) What is accelerated stability testing.
- f) Define Nernst & Zeta Potential.
- g) What is HLB. Write it's importance.

2. Solve **any four** of the following.

20

- a) Explain electrical properties of interface.
  - b) Write a note on catalysis.
  - c) Discuss in detail free & blythe method.
  - d) Write a note on method to determine HLB.
  - e) Classify viscometer. Explain in detail falling sphere viscometer.
- Write a note on zero order kinetics.

3. Solve **any one** of the following.

10

- State & Explain in detail different methods used to determine order of reaction.
- Define surface tension & interfacial tension Explain in detail measurement of surface tension & interfacial tension.

### SECTION – II

4. Solve **any five** of the following.

- Difference between flocculated & Deflocculated suspension.
- Define & classify in brief about emulsion.
- What are derived properties. Enlist various derived properties.
- Write the application of donan membrane equation.
- Define micromeritics. Write it's application.
- What is electrophoresis.
- Write in short about preservation of emulsion.

5. Solve **any four** of the following.

20

- Write a note on kinetic properties of colloids.
- Define optical microscopy & gives it's advantages & disadvantage.
- Write a note on Faraday's & tyndall effect.
- Explain theories of emulsification.
- Write a note on physical stability of emulsion.
- Give in detail theory of sedimentation.

6. Solve **any one** of the following.

10

- Explain in detail DLVO theory, along with it's significance.
- What are colloids. Write in detail optical & kinetic properties of the colloids.

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