

Total No. of Questions : 6]

SEAT No. :

**P1450**

**[5049]-501**

[Total No. of Pages :2

**T.Y.B.Pharmacy**  
**INDUSTRIAL PHARMACY-I**  
**(2013 Pattern) (Semester-V)**

*Time : 3 Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Answers to the two sections should be written in separate books.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*
- 4) All questions are compulsory.*

**SECTION-I**

**Q1)** What is spherical crystallization? Explain in detail the steps involved in process of spherical crystallization. What are pharmaceutical applications of spherical crystallization? **[10]**

OR

What is pelletization? Describe in details steps involved in extrusion spheronization.

**Q2)** Solve any Five: **[15]**

- a) What is compression coating technique? Mention advantages of compression coated tablets.
- b) Describe disintegration test and uniformity of dispersion test for dispersible tablets as per IP 2010.
- c) How do you differentiate between glidants, lubricants and antiadherants
- d) What are advantages of direct compression technique? Name directly compressible excipients.
- e) Explain need and advantages of layered tablets.
- f) Describe construction and principle involved in working of fluidised bed granulator.
- g) What is double impression? How it is avoided?

**P.T.O.**

**Q3) Attempt any Two:**

**[10]**

- a) Explain various excipients used in tablet formulation and their role in tableting.
- b) Describe dissolution test with acceptance criteria for uncoated tablets as per IP 2010.
- c) Explain biopharmaceutical principles of dosage form design.
- d) Describe construction and working of Diosna granulator.

### **SECTION-II**

**Q4) Answer the following (Any one):**

**[10]**

- a) Differentiate between hard gelatin and soft gelatin capsule. Discuss filling of hard gelatin capsule.
- b) Explain standard coating pan with its modifications in details.

**Q5) Answer in brief(Any five):**

**[15]**

- a) Draw a layout plan for capsule manufacturing.
- b) Explain compression coating of tablets.
- c) Explain 'evaluation of coated tablets'.
- d) What do you mean by enteric coating of tablets. Which polymers are used for enteric coating and how do they act?
- e) Explain different types of gelatin. Enlist various steps involved in manufacture of empty gelatin shell. How is capsule protected against tampering.
- f) What are the problems involed in filling hard gelatin capsules?
- g) Discuss formulation of soft gelatin capsules.

**Q6) Answer the following(any two):**

**[10]**

- a) Explain fluidized bed coating of tablets
- b) Explain the principle and operations of automatic capsule filling machine.
- c) Discuss various film coating defects and remedies to resolve these defects.
- d) Give an account of various materials used in film coating of tablets.

