

Day : **Saturday**  
Date : **28/04/2018**

**S-2018-3965**

Time : **10.00 AM TO 01.00 PM**  
Max. Marks : 80

**N.B.:**

- 1) **Q.No.1** and **Q.No.5** are **COMPULSORY**. Out of the remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in the **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** A) Answer **ANY FIVE** of the following: [10]  
i) Define and classify dermatological formulations.  
ii) Why gelatin is a major component of capsule shell manufacturing?  
iii) Enlist various pathways of skin penetration of drugs.  
iv) What are advantages and disadvantages of soft gelatin capsules?  
v) What is the role of buffers in semisolid dosage forms?  
vi) Enumerate various physiochemical properties of drugs that govern skin permeation.
- Q.2** a) Discuss the dermatological factors affecting selection of bases. [08]  
b) Discuss manufacturing process for preparation of hard gelatin capsule shell. [07]
- Q.3** a) Write down the different mechanisms of gel formation. [08]  
b) Discuss various capsule filling methods. [07]
- Q.4** Write short notes on **ANY THREE** of the following: [15]  
a) Evaluation of hard gelatin capsule  
b) Penetration enhancers  
c) Defects in capsule  
d) Evaluation of semisolids

**SECTION – II**

- Q.5** A) Answer **ANY FIVE** of the following: [10]  
i) Mention the advantages and disadvantages of aerosols.  
ii) What are the objectives of granulation?  
iii) What is sub-coating? Why it is carried out?  
iv) Enlist factors influencing pulmonary deposition of drugs.  
v) What are diluents? Give the ideal properties of a tablet diluents.  
vi) Why methacrylic acid co-polymers are used for enteric coating?
- Q.6** a) Discuss in detail dry powder inhalers. [08]  
b) Discuss film coating of tablets. [07]
- Q.7** a) Discuss in details IPQC tests for tablets. [08]  
b) Discuss problems in tablet coating and the remedies thereof. [07]
- Q.8** Write short notes on **ANY THREE** of the following: [15]  
a) Mouth dissolving tablets  
b) Quality control tests for aerosols  
c) Evaluation of coated tablets  
d) Powders