



HU-M2011118 Seat No. _____

M. Pharm. (Sem. II) (CBCS) Examination

June/July - 2017

Novel Drug Delivery System - I

Time : **3 Hours**]

[Total Marks : **80**

- Instructions :**
- (1) Answer and tie both the sections separately.
 - (2) Figure to the right indicates marks.
 - (3) Answer any 3 questions from each section including Que. 1 and Que. 5 are compulsory.

SECTION - I

- 1** Answer ANY SEVEN out of given TEN questions : **7×2=14**
- a) Define : Extended release dosage form.
 - b) What type of GRDDS do you suggest for delivery of Levodopa?
 - c) What do you mean by temper proof packaging?
 - d) Explain MMC Cycle.
 - e) What are the limitations of Gastro retentive drug delivery system.
 - f) Enlist the excipients required for Ocular Drug delivery system.
 - g) Give Marketed example of Colon targeted drug delivery system.
 - h) What do you mean by Orosolve technology?
 - i) Enlist factors affecting colon drug delivery system.
 - j) Define Pulsatile drug delivery system.
- 2** Answer the following :
- a) Which categories of drug are suitable for GRDDS **7**
and Why? Enlist the various approaches for GRDDS
and explain in detail about Floating approach.
 - b) Write a detail note on various approaches for oral **6**
delayed release drug delivery system.

- 3 Answer the following :
- a) Describe primary, secondary and tertiary packaging. 7
 - b) Describe various methods for preparation of nanosuspension. 6

- 4 Answer the following :
- a) Write a note on Novel Ophthalmic products. 7
 - b) Discuss factors affecting drug release from Controlled drug delivery. 6

SECTION - II

- 5 Answer ANY TWO out of given THREE questions : 2×7=14
- a) Write a brief account on mucoadhesive polymer. How one can evaluate mucoadhesive buccal formulation?
 - b) Describe recent advances in semisolid dosage form and Explain Emulgel in detail.
 - c) Enlist the innovations in oral controlled drug delivery system and explain in detail in TIMERX OR IDD.

- 6 Answer the following :
- a) Describe pH dependent approach for colon targeted drug delivery. 7
 - b) Explain significance of sublingual drug delivery system. How they are evaluated? 6

- 7 Answer the following :
- a) Discuss evaluation parameters for 7
 - 1) floating formulations and
 - 2) colon targeted beads formulations.
 - b) Discuss types of oral osmotic capsules based on invitro release mechanism with examples. 6

- 8 Answer the following :
- a) Write a brief account on SEDDS. 7
 - b) Describe recent innovations in parenteral packaging. 6