

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**M. PHARM. SEMESTER - II • EXAMINATION – SUMMER 2016**

**Subject code: 2920102**

**Date: 19/05/2016**

**Subject Name: Novel Drug Delivery System Part-I**

**Time: 10:30 AM To 1:30 PM**

**Total Marks: 80**

**Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Discuss the principle, advantages and mechanism of drug release from osmotic dosage forms. **06**
- (b) Classify different type of osmotic pumps and explain elementary osmotic pump. **05**
- (c) Write a note on basic components of osmotic drug delivery system with example. **05**
- Q.2** (a) Enumerate various approaches for colon targeting. Explain pro-drug approach. **06**
- (b) Discuss pH dependent approach to deliver intact drug molecule to the colon. **05**
- (c) Explain pulsion cap technology. **05**
- Q.3** (a) Explain expandable approach for GRDDS. **06**
- (b) Discuss evaluation parameters for GRDDS. **05**
- (c) Write a short note on effervescent type of floating drug delivery systems. **05**
- Q.4** (a) Discuss advantages, limitations and factors affecting drug delivery via buccal route. **06**
- (b) Discuss formulation aspects of sublingual drug delivery system. **05**
- (c) Describe in brief non-animal capsule shell. **05**
- Q.5** (a) Describe pre-filled syringe technology. **06**
- (b) Discuss various approaches for development of parenterals controlled release formulation. **05**
- (c) Describe self-emulsifying drug delivery system. **05**
- Q.6** (a) Discuss *in vitro* and *in vivo* methods for evaluation of taste. **06**
- (b) Discuss the techniques employed for taste masking of different dosage forms. **05**
- (c) Describe microencapsulation technique for particle coating. **05**
- Q.7** (a) Discuss glass as packaging material. **06**
- (b) What are the criteria for selection of materials for pharmaceutical packaging? **05**
- (c) Why there is a requirement for regulation of pharmaceutical packaging materials? **05**

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