

**THIRD YEAR PHARM. D : SUMMER - 2018**  
**SUBJECT: PHARMACEUTICAL FORMULATIONS**

Day: **Thursday**  
Date: **19/04/2018**

**S-2018-4037**

Time: **10.00 AM to 01.00 PM**  
Max. Marks: 70

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**N.B.:**

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

- Q.1 A)** Answer any **FOUR** of the following: **(08)**
- i) Explain importance of pKa of drug as pre-formulation criteria.
  - ii) Write rational to formulate sublingual tablets and related patient instruction.
  - iii) Write ideal requirements for capsule shell material and suggest two types of such material.
  - iv) Differentiate between dissolution and disintegration of tablets.
  - v) Write importance of particle size and shape of drug in tablet formulation.
- B)** Discuss friability test. **(03)**
- Q.2** Discuss in detail formulation to be filled in hard gelatin capsules. **(12)**
- Q.3 a)** Explain working of tablet compression machine. **(07)**
- b)** Discuss drug content, drug uniformity and weight variation tests for tablets and capsules. **(05)**
- Q.4** Write short notes on any **THREE** of the following: **(12)**
- a) Biopharmaceutical aspect of formulation design
  - b) Properties of ideal granules
  - c) Soft gelatin capsules
  - d) Effervescent tablets

**P. T. O.**

## SECTION-II

- Q.5 A)** Answer any **FOUR** of the following: **(08)**
- i)** Write reasons to formulate elixirs and its limitations as dosage form.
  - ii)** Write nature of drug that may not need suspending aspect to formulate its suspension.
  - iii)** Write approach to select preservative in emulsions.
  - iv)** What is importance of buffers in pharmaceutical formulations?
  - v)** Suggest a base for eye ointment.
- B)** Discuss stabilization of deflocculated suspension. **(03)**
- Q.6** Discuss requirements of sterile formulations and selection of additives for injectables. **(12)**
- Q.7 a)** Classify various semisolid bases. Suggest a typical base required to formulate transdermal gel. **(07)**
- b)** Write rationale to formulate suppositories. **(05)**
- Q.8** Write short notes on any **THREE** of the following: **(12)**
- a)** Colouring agents in liquid orals
  - b)** Pyrogen testing
  - c)** Aseptic area
  - d)** Selection of antioxidants for emulsions

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