

First Year B. Pharm. (Practice) : SUMMER - 2019

SUBJECT : APPLIED PHARMACEUTICS

Day : Friday
Date : 28/06/2019

Time : 10.00 AM TO 01.00 PM
Max. Marks : 60

S-2019-5372

N.B.

- 1) **Q.No. 1 and Q.No. 5** are **COMPULSORY**. Out of remaining attempt **ANY TWO** questions from Section – I and **ANY TWO** questions from Section – II.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SEPARATE** answerbook.

SECTION – I

- Q.1 A)** Attempt **any seven** objective questions (MCQs / fill in the blanks) of the **(07)** following.
- i) Primary reason to formulate paediatric oral liquid is _____.
 - a) to improve palatability
 - b) for ease of administration
 - c) to improve bioavailability
 - d) to improve stability
 - ii) Water is choice of solvent for oral liquid formulations; most important reason for it is _____.
 - a) widely available
 - b) low cost
 - c) physiologically compatible and safe
 - d) good solvent property for all the drug molecules
 - iii) The main reason to formulate dry syrup is _____.
 - a) ease of handling
 - b) to improve bioavailability
 - c) to improve taste
 - d) to protect from moisture
 - iv) Eye drops and injection are same in requirements, except _____.
 - a) both are sterile
 - b) both are pyrogen free
 - c) both are isotonic
 - d) a & c
 - v) Store in cool place indicates temperature of about _____ °C.
 - vi) Hard capsule of size number _____ is usually used for human.
 - vii) Main demerit of conventional dosage form is _____ that is overcome by formulating it into sustained release dosage form.
 - viii) Enteric coated tablet should release drug above pH _____.
- Q.1 B)** Give principle of GMP, QA and QC. **(03)**
- Q.2** Discuss merit and demerits of formulating dosage form and write concept of formulating various types of tables. **(10)**
- Q.3 a)** Discuss properties of active pharmaceutical ingredient that should be considered while designing its dosage form. **(05)**
- b)** Discuss mechanism of transdermal penetration of drug. **(05)**
- Q.4** Answer **ANY FIVE** of the following. **(10)**
- i) Write with reason two examples of drugs and its proprietary products that are formulated into enteric coated tablets.
 - ii) Write two examples of drugs that need to store in cold place and dry place.
 - iii) Write merit and demerit of insulin syringe over conventional insulin injection.
 - iv) Compare the concept of dispersible tablet and mouth dissolving tablet.
 - v) Explain method to administer pessary.
 - vi) Write concept of formulation of lotions with two examples of marketed products.

P.T.O.

SECTION – II

- Q.5 A)** Attempt **any seven** objective questions (MCQs / fill in the blanks) of the following. (07)
- i) A drug having Low solubility and low Permeability is related to _____.
 - a) BCS Class I
 - b) BCS Class II
 - c) BCS Class III
 - d) BCS Class IV
 - ii) Name of antibiotics which causes staining of infant teeth _____.
 - a) Penicillin
 - b) erythromycin
 - c) Tetracycline
 - d) All the above
 - iii) One of the following reaction does not take place in Phase I metabolic _____.
 - a) Oxidation
 - b) Reduction
 - c) Hydrolysis
 - d) Conjugation
 - iv) For absorption of drug from gastrointestinal tract, preferentially it should have log P value _____.
 - a) Less than 1
 - b) 1–2
 - c) 4–5
 - d) Above 5
 - v) The drug passage from stomach to the small intestine is called _____.
 - vi) _____ molecular size of drug pass from blood to extracellular fluid.
 - vii) BCS Class II drug shows _____ Solubility and _____ Permeability.
 - viii) Generic product should have similar _____ to branded product.
- Q.5 B)** Explain the mechanism response for loss dicoumarol activity due to Phenobarbital co-administration? (03)
- Q.6** Explain in details various barriers for drug distribution. (10)
- Q.7 a)** Define Bioequivalence and discuss importance of BA/BE Studies. (05)
- b)** Explain patient related factors affecting absorption of drugs. (05)
- Q.8** Answer **ANY FIVE** of the following. (10)
- i) Define phagocytosis and pinocytosis.
 - ii) Why sodium and potassium salt of diclofenac available in market.
 - iii) Write note on pro-drug approach of levodopa in Parkinsonism patients.
 - iv) Why should a nursing mother refrain from taking medicine and give examples?
 - v) What are various sites of drug metabolism in the body? Why is liver considered the major site for such a process?
 - vi) Write significance of biological half-life ($t_{1/2}$) of drug.

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