03.06.15 (M.Pharm-Reg)

Total No. of printed pages = 5

PY 134202

Roll No. of candidate

M.Pharm 2nd Semester End-Term Examination

NOVEL DRUG DELIVERY SYSTEMS

Full Marks – 100 Pass-Marks – 35 Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions (any *ten*) : 10×2=20

   (a) Name two proprietary TDDS with their generic name and indications.

   (b) Compare and contrast between liposome, niosome and proniosome.

   (c) Why insulin cannot be given orally ?

   (d) Why multiple emulsion can be used as controlled drug delivery carrier ?

[Turn over

(e) Which one of the following is NOT true ?

(i) Modified release formulations are most useful for drugs with a long half-life.

(ii) Modified release formulations can often reduce side-effects.

(iii) Modified release formulations can improve patient compliance.

(iv) Modified release formulation can be used for local drug delivery.

(f) Choose the correct answer(s) :

(i) Drug release from reservoir systems is controlled by diffusion.

(ii) Drug release from reservoir systems normally follow zero-order kinetics.

(iii) Drug release from reservoir systems is controlled by dissolution.

(iv) Drug release from reservoir systems normally follow first-order kinetics.

(g) Enlist the mechanisms of gastroretention.

(h) How can you determine transdermal flux graphically ?

(i) What is the significance of PEGylated nanoparticles in drug targeting ?

(j) How can the suppositories be used for systemic drug action ?

(k) What are the causes of instability of emulsion ?

2. Answer the following (any *ten*) : 10×3=30

(a) Explain the principle of iontophoresis.

(b) State the design of 'occurent' controlled release system.

(c) State the sustained release injectables with examples.

(d) State the application of nanoparticles.

(e) State the merits and demerits of buccal dosage forms.

(f) State the principles of sustained skin permeation.

(g) State the components of TDDS.

(h) How are nanoparticles prepared ?

(i) State the transport phenomena in multiple emulsion.

(j) State the application of hydrogel.

(k) What are the scopes and challenges of Buccal drug delivery ?

3. Answer the following. (any *ten*) : 10×5=50

(a) Describe long acting contraceptive formulations.

(b) Discuss the influence of excipients in the formulation of gastroretentive drug delivery systems.

(c) Discuss the formulation of brain specific drug delivery.

(d) Discuss the mechanism of drug release from osmotic dosage forms giving its merits and demerits.

(e) Discuss the in-vitro evaluation of TDDS.

(f) Discuss the formulation of colon targeted drug delivery system.

(g) Discuss the challenges in the development and stability of peptide delivery products.

(h) Discuss the formulation and application of magnetic microspheres.

(i) Discuss the methods and mechanisms of drug release modification in synthetic hydrogel.

(j) Discuss the biopharmaceutics and pharmacokinetic properties of drug for the design of peroral CRDDS.

(k) Briefly discuss the formulation of Injectable in-situ Gel system. What are its application in Pharmacy ?