21-05-18

Total No. of printed pages = 4

PY 132801

Roll No. of candidate

Girijananda Chowdhury Institute of Pharmaceutical Science
GIPS
LIBRARY
Azara, Ghy-17

2018

B.Pharm. 8th Semester End-Term Examination

PHARMACEUTICS – VII
(PHARM. TECHNOLOGY – III)

Full Marks – 100 Time – Three hours

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

Answer question No. 1 and any *six from* the rest :

1. Select the correct answer of the following: $(10 \times 1 = 10)$

   (a) Controlled release drug delivery system is _____

   (i) Site specific
   (ii) Rate specific
   (iii) Both of the above
   (iv) None of the above

   (b) Advantages of controlled release drug delivery system is _____

   (i) Reduction of frequency of administration
   (ii) Improvement of patient compliance
   (iii) Reduction in health care cost
   (iv) All of the above

[Turn over

(c) Which of the following is a vesicles?

(i) Micro spheres

(ii) Liposomes

(iii) Nano particles

(iv) All of the above

(d) Duration of action of oral controlled release formulation should be

(i) 2 to 4 hours

(ii) 3 to 6 hours

(iii) 6 to 12 hours

(iv) 12 to 24 hours

(e) Increasing surface area by milling or by other methods may lead to ———————

(i) Oxidation

(ii) Moisture absorption

(iii) Polymorphic changes

(iv) All of the above

(f) Dissolution rate of solid in its own solution is described by

(i) Fick's law

(ii) Noyes – Whitney equation

(iii) Henderson – Hasselbach equation

(iv) Korseneyer-Peppas equation

(g) DSC is useful in the investigation of ———————

(i) Polymorphic changes

(ii) Decomposition data

(iii) Particle size and shape

(iv) Chemical kinetics

Girijananda Chowdhury Institute ★ Azara LIBR

(h) Which of the following is not a purpose for microencapsulation

(i) Permselectivity of enzyme

(ii) Selective sorption

(iii) Taste masking

(iv) Modification of liquids to free flouring solids

(i) Solubilization of poorly soluble drugs is a result of ———————

(i) Drug-polymer complex formation

(ii) Polymer-surfactant interaction

(iii) Micelle formation by surfactants

(iv) All of the above

(j) The key factor on which the design and efficiency of SR dosage forms depends is ———————

(i) Rate of drug absorption

(ii) Rate of drug elimination

(iii) Biological half life of the drug

(iv) All of the above

2. (a) Under bulk characterization of drug substances give the importance of bulk density and angle of repose. (6)

(b) What methods are to be followed for drug-excipient compatibility studies? Give the principle and importance of DSC method. (3+6=9)

3. (a) Show how partition coefficient and dissolution affect the bio availability of drugs. (8)

(b) Give the importance of pH-partition theory in absorption of drugs from GIT. (7)

Giriijananda Chowdhury Institute of Pharmaceutical Science
GIPS
LIBRARY
Azara, Gy-17

4. (a) Explain the role of the following pre-formulation parameters in stability and bio availability of finished pharmaceutical products
   (i) Dielectric constant
   (ii) Solubility. (6)

   (b) Give the arrhenius method for accelerated stability studies of drug products. Use your imazinary data for determination of shelf-life of a product. (9)

5. (a) Discuss the coaceruation-phase separation method of microencapsulation. How will you evaluate microcapsules? (5+5=10)

   (b) Differentiate between spray drying and spray congealing methods. (5)

6. (a) What are the factors which affect design of SR dosage forms? How is initial and maintenance doses calculated? (4+5=9)

   (b) Highlight the pharmaceutical applications of the following with examples.
   (i) Liposomes
   (ii) Nanopardicles. (6)

7. (a) Discuss the transdermal drug delivery system with emphasis on implants. (7)

   (b) Discuss Air-suspension technique used in micro encapsulation. (8)

8. (a) Name some polymers which are used in preparation of ocuserts. (3)

   (b) How are nanoparticles prepared? (4)

   (c) Give the principle of erythrocytic release of drugs. (4)

   (d) Describe the process of cellular uptake of liposomes in drug targeting. (4)

9. Write short notes on:
   (a) Intrauterine devices (IUDS) (5)
   (b) Osmotic pump (5)
   (c) Delayed release tablets. (5)