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PY 132801

Roll No. of candidate



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 × 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

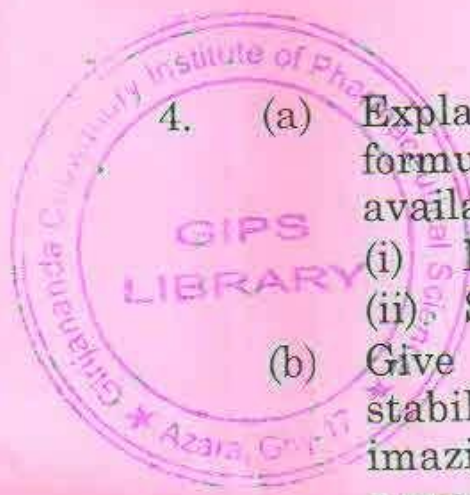
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- (c) Which of the following is a vesicles?
- (i) Micro spheres
 - (ii) Liposomes
 - (iii) Nano particles
 - (iv) All of the above
- (d) Duration of action of oral controlled release formulation should be
- (i) 2 to 4 hours
 - (ii) 3 to 6 hours
 - (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





- (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 flowing 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)



4. (a) Explain the role of the following pre-formulation parameters in stability and bio availability of finished pharmaceutical products
- (i) Dielectric constant (6)
 - (ii) Solubility. (6)
- (b) Give the arrhenius method for accelerated stability studies of drug products. Use your imaginary 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 (6)
 - (ii) Nanoparticles. (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)