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PY 132709E2

BINA CHOWDHURY CENTRAL LIBRARY
(GIMT & GIPS)

Azara, Hatkhowapara,

Guwahati - 781017

Roll No. of candidate

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2019

B.Pharm. 7th (Old Regulation) End-Term Semester Examination

Elective – ADVANCED PHARMACEUTICS

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.

Answer all questions : (MCQ)

(10 × 1 = 10)

1. (i) A semipermeable membrane is an essential part in the design of
- (a) Matrix diffusion controlled system
 - (b) Osmotic pressure controlled system
 - (c) Water penetration and swelling controlled system
 - (d) Reservoir diffusion controlled system

[Turn over

- (ii) Microemulsion gives the globule size in the range of
- (a) 10 – 1000 nm
 - (b) 10 - 100 nm
 - (c) 1 - 10 nm
 - (d) 100 nm – 100 μ m
- (iii) Particle size analysis of colloidal system can be done by
- (a) DSC
 - (b) FT – IR
 - (c) Zetasizer
 - (d) Diffusion cell
- (iv) Polyelectrolyte complex is formed between
- (a) Cationic and anionic Polymer
 - (b) Anionic and non-ionic polymer
 - (c) Cationic and non-ionic polymer
 - (d) None of the above

- (v) Depot preparation is an example of
- (a) Parenteral controlled release system
 - (b) Transdermal drug delivery system
 - (c) Ocular drug delivery system
 - (d) Gastro retentive drug delivery system
- (vi) Which one of the following shows a single point IVIV correlation
- (a) Level A
 - (b) Level B
 - (c) Level C
 - (d) All of the above
- (vii) Blister and strip packages are used as
- (a) Tertiary packing
 - (b) Secondary packaging
 - (c) Primary packaging
 - (d) None of the above

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(viii) Water attack test is performed

- (a) 121°C
- (b) 100°C
- (c) 160°C
- (d) 0°C

(ix) The following plastic is used for eye drop bottles

- (a) HDPE
- (b) Polypropylene
- (c) LDPE
- (d) Polystyrene

(x) For matrix system, sustained release can be obtained by the following parameters, except

- (a) Altering porosity of tablet
- (b) Decreasing tablet wettability
- (c) Dissolving at lower rate
- (d) Encapsulating in rate controlling membrane

2. (a) What do you mean by sustained and controlled drug delivery?

(b) What are matrix and reservoir system?

(c) Explain the mechanisms of drug release from controlled drug delivery system. (5+5+5)

3. (a) What are polymers and give the types of polymers based on their properties?
- (b) Give the types of cellulose derivatives and their applications.
- (c) Give the properties, applications of poly vinyl alcohol and acrylate polymers (5+5+5)
4. (a) Explain the categories of pharmaceutical packaging.
- (b) Outline the advantages and disadvantages of plastic and glass as packaging material.
- (c) Discuss the regulatory aspects and specification of packaging material. (5+5+5)
5. (a) Write the properties, advantages, disadvantages and applications of microemulsion.
- (b) Describe any three methods of microencapsulation. (6+9)
6. (a) Give brief details on types and formulation of osmotic pressure controlled drug delivery system.
- (b) Explain formulation design, advantages, disadvantages and evaluation of transdermal drug delivery system. (6+9)

7. (a) What are the in vitro-in vivo studies performed for microparticles.
- (b) Define and classify smart polymers. Discuss the applications of smart polymers in drug delivery. (6+9)
8. (a) Discuss the methods of preparation of multiple emulsion?
- (b) Explain the preparation, characteristics and applications of nanoparticles (6+9)
9. Explain any TWO of the following: (2 × 7.5 = 15)
- (a) IVIV correlation
- (b) Parenteral controlled release
- (c) Ployelectrolyte complexes
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