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B PHARM
(SEM VII) THEORY EXAMINATION 2022-23
NOVEL DRUG DELIVERY SYSTEMS (NDDS)

*Time: 3 Hours**Total Marks: 75*

Note: Attempt all Sections. If require any missing data, then choose suitably.

SECTION A

1. Attempt all questions in brief.

10 x 2 = 20

- (a) Mention any three advantages of controlled drug delivery systems over conventional drug delivery systems.
- (b) Enlist any two biological properties of drugs relevant to controlled release formulations.
- (c) List any two elements that effect permeation.
- (d) Distinguish between microspheres and microcapsules.
- (e) Mention the advantages associated with intrauterine devices (IUDs).
- (f) Define dry powder inhalers (DPI).
- (g) Illustrate any three approaches of gastro adhesive systems.
- (h) Define niosomes.
- (i) What is targeted drug delivery systems?
- (j) Define implants insects.

SECTION B

2. Attempt any two parts of the following:

2 x 10 = 20

- (a) Explain the concept of monoclonal antibodies in detail with applications.
- (b) Describe in detail the development of intrauterine devices (IUDs). Also explain its applications.
- (c) Explain the approaches for gastro retentive drug delivery systems (GRDDS). Clearly describe any two approaches.

SECTION C

3. Attempt any five parts of the following:

7 x 5 = 35

- (a) Explain any two.
 - (i) Metered dose inhalers
 - (ii) Nasal sprays
 - (iii) Nebulizers
- (b) Explain in detail about selection of drug candidates for controlled drug delivery systems.
- (c) Explain about nanoparticles in detail.
- (d) Discuss in detail various approaches of TDDS.
- (e) Illustrate concept of Ocuserts with suitable examples.
- (f) Explain the concept of Osmotic pump in detail.
- (g) Describe any two methods of microencapsulation in detail.