

DEPTH OF BIOLOGY

B. PHARMACY

7 SEM IMPORTANT QUESTIONS

**NOVEL DRUG DELIVERY
SYSTEM {NDDS}**

Unit-I

10 Hours

Controlled drug delivery systems: Introduction, terminology/definitions and rationale, advantages, disadvantages, selection of drug candidates. Approaches to design controlled release formulations based on diffusion, dissolution and ion exchange principles. Physicochemical and biological properties of drugs relevant to controlled release formulations

Polymers: Introduction, classification, properties, advantages and application of polymers in formulation of controlled release drug delivery systems.

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10 MARKS

Q1. Explain the control release formulation and discuss the various approaches to design C.D.D.S

Q2. Define polymer and its classification and also explain it's Explanation .

5 MARKS

Q1. Discuss the approaches to C.D.D.S in context to diffusion and dissolution .

Q2. Explain the Physicochemical of biological properties of Drugs Relevant to C.D.D.S.

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Q3. What are the various application of polymer used in the formulation of C.D.D.S.

2 MARKS

Q1. What do you mean by C.D.D.S.

Q2. Define polymer .

Q3. Write any two physiochemical/Biological properties of drug relevant to C.D.D.S.

Q4. Define Ideal characteristics of polymeric required in formulation of C.D.D.S

Q5. Write any two application of polymer ?

Unit-II

10 Hours

Microencapsulation: Definition, advantages and disadvantages, microspheres /microcapsules, microparticles, methods of microencapsulation, applications

Mucosal Drug Delivery system: Introduction, Principles of bioadhesion / mucoadhesion, concepts, advantages and disadvantages, transmucosal permeability and formulation considerations of buccal delivery systems

Implantable Drug Delivery Systems:Introduction, advantages and disadvantages, concept of implants and osmotic pump

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10 MARKS

Q1. Discuss various methods of formulation of Microencapsulation and their applications ?

Q2. Define transmucosal permeability and also Explain the formulation consideration of Buccal delivery system .

5 MARKS

Q1. Define Mucosal drug delivery System and also Explain the principle of Bio-adhesive or Mucoadhesive .

Q2. Write a detailed note on formulation consideration of Buccal delivery system .

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Q3. Explain implantable drug delivery system and Elaborate concept of implants and osmotic pump .

2 MARKS

Q1. Define Microencapsulation .

Q2. Explain Mucoadhesive / Mucosal drug delivery System (MDDS) .

Q3. Explain principle of Bio-adhesion ?

Q4. What are the disadvantages of IDDS ?

Q5. What are the various application of Microencapsulation ?

Unit-III

10 Hours

Transdermal Drug Delivery Systems: Introduction, Permeation through skin, factors affecting permeation, permeation enhancers, basic components of TDDS, formulation approaches

Gastroretentive drug delivery systems: Introduction, advantages, disadvantages, approaches for GRDDS – Floating, high density systems, inflatable and gastroadhesive systems and their applications

Nasopulmonary drug delivery system: Introduction to Nasal and Pulmonary routes of drug delivery, Formulation of Inhalers (dry powder and metered dose), nasal sprays, nebulizers

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10 MARKS

Q1. Define TDDS and basic components of TDDS .

Q2. What are the various formulation approaches of TDDS and also explain factor affecting permeation .

Q 3. Elaborate the various approaches for GRDDS ?

5 MARKS

Q1. Define Permeation of drug and also explain factor affecting permeation ?

Q2. Write a short note on permeation enhancers?

Q3. Elaborate the basic component of TDDS ?

Q4. Write a short note on Nasopulmonary drug delivery system ?

Q5. Formulation of Inhalers ?

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Q6. Discuss floating Gastro Retentive drug delivery system .

2 MARKS

Q1. Define TDDS ?

Q2. Define GDDS ?

Q3. Define Nasopulmonary DDS ?

Q4. Explain Nasal spray ?

Q5. Explain Nebulizers ?

Q6. What is the use of dry powder inhalers ?

Q7. Define permeation enhancer ?

Unit-IV

Targeted drug Delivery: Concepts and approaches advantages and disadvantages, introduction to liposomes, niosomes, nanoparticles, monoclonal antibodies and their applications

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10 MARKS

Q1. Explain the formulation , advantages , disadvantages and application of Liposomes / Niosomes / Nanoparticles / Monoclonal Antibodies .

5 MARKS

Q1. Explain the formulation of Monoclonal Antibodies

OR

Write a short note on Monoclonal Antibodies .

Q2. Define TDDS and it's various approaches ?

Q3. Explain the formulation of Liposomes ?

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2 MARKS

Q1. What is Liposomes ?

Q2. Define Niosomes ?

Q3. Define Nanoparticles ?

Q4. Define Monoclonal Antibodies ?

Q5. What is TDDS ?

Q6. Explain the major component of Liposomes ?

Unit-V

07 Hours

Ocular Drug Delivery Systems: Introduction, intra ocular barriers and methods to overcome –Preliminary study, ocular formulations and ocuserts

Intrauterine Drug Delivery Systems: Introduction, advantages and disadvantages, development of intra uterine devices (IUDs) and applications

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10 MARKS

Q1. Define ODDS and also explain intra-ocular Barriers and methods to overcome .

Q2. Explain IUD and also discuss Development of IUD and It's applications .

5 MARKS

Q1. Define Intraocular barriers and methods to overcome .

Q2. Define Ocular formulation and ocuserts .

Q3. Write a short note on Development of IUD and it's applications .

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2 MARKS

Q1. Define ODDS ?

Q2. Define IUDS ?

Q3. Application of IUD ?

Q4. Define Ocular formulation ?

Q5. What is ocusersts ?

Q6. Give two examples of IUD ?