



1. Discuss the various approaches for the Transdermal drug delivery systems with its evaluations.
2. Discuss different approaches for injectable controlled drug delivery system.
3. Discuss the formulation, evaluation and applications of Liposomes.
4. What is targeted drug delivery system? Discuss the concept with its merits and demerits and write the applications of targeted drug delivery systems.

**SHORT ESSAY (Answer any Nine)**

**9 X 5 = 45 Marks**

5. Discuss the rationale behind Transdermal drug delivery.
6. Write the diagnostic applications of monoclonal antibodies.
7. Explain iontophoresis as technique to enhance the drug permeation.
8. Write a note on intrauterine implants.
9. Write a note on metal nanoparticles.
10. Discuss about carbon nanotubes.
11. Write a note on niosomes.
12. Write a note on Dendrimers.
13. Write a note on safety issues related to nano drug delivery.
14. Discuss the merits and demerits of injectable controlled drug delivery system.

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