2-Mark Questions (Short Answer)

These are concise questions requiring brief responses (2-3 sentences or a small table).

1. Define targeted drug delivery and give one example of its application.
2. What is the EPR effect in targeted drug delivery?
3. Differentiate between active and passive targeting.
4. State one advantage and one disadvantage of liposomes.
5. What are niosomes, and how do they differ from liposomes?
6. Name two applications of monoclonal antibodies in drug delivery.
7. Why are nanoparticles suitable for crossing the blood-brain barrier?
8. What is a key disadvantage of targeted drug delivery systems?

5-Mark Questions (Medium Answer)

These require detailed explanations, often with examples, mechanisms, or comparisons (4-6 sentences or diagrams/lists).

1. Explain the concept of active targeting with an example of its use in drug delivery.
2. Discuss the advantages of targeted drug delivery over conventional drug delivery systems.
3. Compare and contrast liposomes and niosomes in terms of composition and stability.
4. Describe the role of nanoparticles in gene therapy with an example.
5. What are the challenges in using monoclonal antibodies for targeted drug delivery?
6. Explain how the EPR effect aids passive targeting in cancer therapy.

20-Mark Questions (Long Answer)

These require comprehensive, structured responses (2-3 paragraphs, possibly with diagrams), including detailed explanations and critical analysis.

1. Discuss the concepts of targeted drug delivery, including active and passive targeting, with their advantages and disadvantages. Provide examples for each approach.

2. Explain the structure, preparation, and applications of liposomes in targeted drug delivery. Highlight their advantages and limitations.

3. Evaluate the role of nanoparticles in targeted drug delivery, including their types, applications, and challenges. Provide specific examples.

4. Describe the use of monoclonal antibodies in targeted drug delivery, including their mechanism, applications, and limitations. Illustrate with examples.

5. Compare the properties, advantages, and disadvantages of liposomes, niosomes, and nanoparticles as drug delivery systems. Which would you recommend for cancer therapy, and why?