**NOVEL DRUG DELIVERY SYSTEM QUESTION BANK**

**10 Marks questions**

1. Describe the various physicochemical and pharmaceutical factors to be considered in selection of a drug candidate for controlled delivery formulations.
2. Explain the types, advantages and disadvantages of implantable drug delivery system
3. Describe in detail about of gastrorententive drug delivery system with advantages and disadvantages.
4. Write the concept of controlled drug delivery systems. Explain the approaches for the Controlled release formulations based on dissolution.
5. Explain different formulation approaches of Transdermal drug delivery system.
6. Describe the various approaches to formulate dissolution and diffusion based controlled release drug delivery systems.
7. Describe various theories of mucoadhesion with their significance in designing mucoadhesive products.
8. Write the concept of controlled drug delivery systems. Explain the approaches for the Controlled release formulations based on dissolution.
9. Explain in detail about various types of osmotic pumps
10. Explain the types, advantages and disadvantages of mucoadhesive formulations
11. What are gastrorententive drug delivery systems? Explain various approaches of gastrorententive drug delivery system.
12. Explain the principle involved in the design of controlled drug delivery systems.
13. Write in details about the implantable drug delivery system
14. Discuss in detailed about gastrorententive floating drug delivery systems.
15. Explain in detail about various types of osmotic pumps
16. Describe in detail about formulations aspects of Nasal Spray
17. Write the concept of controlled drug delivery systems. Explain the approaches for the controlled release formulations based on ion exchange technique.
18. Explain in details of implantable drug delivery system and their drug release mechanisms.
19. What is a pulmonary route of administration? Explain in detail about drug powder inhalers
20. Describe in detail about formulations aspects of Nasal Spray
21. Discuss permeation of the drug through the skin and explain factors affecting permeation of drug through skin.
22. Write about the various factors which influence development of controlled release formulations.
23. Write about factors affecting designing and development of mucoadhesive dosage forms.
24. Define Transdermal drug delivery system (TDDS)? Give advantages and disadvantages. Describe permeation enhancer with examples.
25. Explain about various factors behind controlled release drug delivery systems. Describe various approaches
26. Explain in detail about the evaluation of mucoadhesive formulations
27. Write in details about controlled release drug delivery system
28. Write in details about mucoadhesive drug delivery systems.
29. Define Transdermal drug delivery system (TDDS)? Describe various basic components of TDDS.
30. Explain the principle, advantages, disadvantages and types of controlled release formulations.

**5 MARKS QUESTIONS**

1. Classify the polymers used to modify the drug release

2. Explain methods of implants preparations

3. Write about concept of mucoadhesion

4. Describe Ion Exchange Resins based controlled release formulation

5. Discuss gastroadhesive drug delivery systems and its applications

6. Write in details about Dry powder inhalers

7. Write the composition and classification of liposomes

8. Write the challenges in delivering drug to the eye

9. Discuss briefly about Intrauterine drug delivery systems

10. What are biodegradable and non- biodegradable polymers?

11. Explain the osmotically regulated implants as new drug delivery system.

12. Explain the pharmaceutical applications of microspheres

13. Write about reservoir and matrix type of controlled release formulations

14. Explain about microballoons as gastroadhesive drug delivery system

15. Write short note on nebuliser

16. Write the advantages and disadvantages of liposomes

17. Write a note on novel ocular formulations.

18. Describe about hormonal intrauterine drug delivery systems.

19. Explain the biological factors affecting controlled release drug delivery systems

20. Discuss about gastroadhesive drug delivery system applications

21. Write the solvent extraction and solvent evaporation methods to prepare microspheres

22. Explain mechanisms involved in drug release retardation using polymers

23. Write note on pulmonary route as a promising route of drug administration

24. Write methods of preparing nanoparticles

25. State various methods to prepare liposomes

26. Describe osmotically regulated ocuserts

27. Discuss briefly on intra-vaginal drug delivery systems.

28. Write about the drug candidate section criteria for developments of controlled release drug delivery systems

29. Write the advantages and disadvantage of implants

30. Write short notes on Gastroretentive floating drug delivery system

31. Write about the types and uses of controlled release polymers

32. Describe the non effervescent gastroadhesive drug delivery system

33. What are the excipients used for nasal spray formulation?

34. State various methods to prepare nanoparticles

35. Write the advantages and disadvantages of ocuserts

36. Discuss briefly on contraceptive patches.

37. Explain the various requirements of drug candidate to be selected for formulation into controlled drug delivery system.

38. Explain the theories of mucoadhesion

39. Explain the application of Transdermal drug delivery systems

40. Write shortly about types of polymers with their applications in pharmaceuticals

41. Write mucosal permeation enhancers with examples

42. Describe the formulations of nasal sprays

43. Discuss strategies and components of targeted drug delivery systems

44. Write in details about types of ocuserts

45. Describe about contraceptive implants

46. Write in details about the microencapsulated drug delivery systems

47. Describe about mucosa and drug permeation across it

48. Write about the various types of osmotic pumps

49. Describe shortly about polymers in modified drug delivery system

50. Write applications of transdermal drug delivery system

51. Write briefly about metered dose inhalers

52. Write advantages, disadvantages and applications of nanoparticles

53. Write mechanisms of controlled drug release in ophthalmic drug delivery

54. What are advantages and disadvantage of intrauterine drug delivery systems

55. Explain types, advantages and disadvantages of microparticulate drug delivery systems

56. Write note on biodegradable and non-biodegradable microspheres

57. Describe osmotically regulated implants as new drug delivery system

58. Write the advantage and role of polymers in modified drug delivery.

59. Write short note on formulations of transdermal drug delivery system

60. What are the excipients of nasal spray formulations?

61. Describe the monoclonal antibodies with its applications

62. Describe about formulation of ocular drug delivery systems

63. What are the various applications of intrauterine drug delivery systems.

64. Enlist factors affecting formulation of controlled drug release dosage forms

65. Write short note on pectin

66. State Polymeric microspheres

67. Write the basic components in buccal drug delivery system

68. Write 3D printing in implantable drug delivery system

69. Write advantage and disadvantage of nebuliser

70. Enlist the chemical enhancers in transdermal drug delivery

71. Write the types of niosomes

72. What are advantages of copper intrauterine devises

73. Write about various applications of microparticulate drug delivery systems

74. Define and classify different mucoadhesive formulations

75. Explain evaluations of microparticulate drug delivery system

76. Write about controlled release polymers and their applications

77. Write note on transdermal drug delivery permeation enhancers with examples

78. Discuss gastrorententive drug delivery system applications

79. Describe the monoclonal antibodies with its applications

80. Write the types, advantages and disadvantages of ocuserts

81. Write a note on contraceptives implants

82. Explain in detail about types of microparticulate drug delivery systems and their Evaluation

83. Write note on applications of mucoadhesion in development of pharmaceutical products

84. Define and classify the different microparticulate drug delivery systems

85. Write the principal uses of polymers in pharmaceutical products

86. Discuss the factors affecting permeation of drug through the skin

87. Write microballoons as gastroadhesive drug delivery system

88. State various methods to prepare nanoparticles

89. Discuss shortly on ocular drug delivery systems

90. Write application of intrauterine drug delivery systems

**2 MARKS QUESTIONS**

1. Write the criteria followed to select polymers for Controlled release drug delivery systems

2. Write factors affecting formulation of Controlled release drug delivery systems

3. Define microsphere and microcapsules

4. What are the stages in mucoadhesion

5. What are the drug release mechanisms in implants

6. Write the excipients in nasal spray formulations

7. Enlist any four applications of nanoparticles

8. Write types of contact lenses

9. What are monoclonal antibodies

10. Write applications of intrauterine drug delivery system

11. State Hixson Crowell model

12. Write a note on polymerisation technique

13. Write about immunization implants

14. Write polymers used as backing layer in Transdermal drug delivery

15. Enlist uses of mucoadhesive in drug delivery

16. Write advantage of Nasal drug delivery

17. Write about types of niosomes

18. Describe salting out method of preparing nanoparticles

19. State advantages of ocuserts

20. What are contraceptive patches

21. State Korsmayer’s and Peppas model

22. Write any four application of polymers in pharmaceuticals

23. Give examples of mucoadhesive formulations

24. Write note on magnetic microspheres

25. Enlist advantages of implantable drug delivery system

26. Enlist excipients used in nasal spray

27. Describe about GRAS

28. What are the strategies of drug targeting

29. State SODI

30. Enlist applications of intrauterine drug delivery

31. State Higuchi model

32. Write short note on Hydrogels

33. Write the test involved in invitro mucoadhesion

34. State disadvantages of implantable drug delivery system

35. Enlist the types of nebulisers

36. Enlist the components of drug targeting

37. Write the types of microencapsulation method

38. What are the types of niosomes

39. What are the drug absorption routes in eye

40. Enlist intra-vaginal drug delivery systems.

41. Define apparent Partition coefficient

42. Write the general mechanisms of drug release from polymers

43. Write note on freeze drying in microencapsulation

44. What are the factors affecting mucoadhesion

45. Write note on DUROS osmotic pump

46. Write polymers used in transdermal drug delivery systems

47. State Niosomes

48. Give advantages of liposomes

49. What are OCUFIT

50. Write advantage of progesterone Intrauterine Devises.

51. Define absolute bioavailability

52. What are the criteria followed in polymer selection in controlled drug delivery systems

53. Write note on spray drying in microencapsulation

54. What are important stages of mucoadhesion

55. Write note on ALZET osmotic pump

56. State various approaches of transdermal drug delivery system

57. Enlist excipients used in nasal spray formulations

58. Write types of liposomes

59. Give types of ocular inserts

60. What are disadvantages of copper intrauterine devises.

61. Write note on matrix diffusion system

62. Write short note on alginates

63. Write the drug release mechanisms in microencapsulated products

64. Write the role of saliva and mucus in mucosal drug delivery

65. State basic components of transdermal drug delivery

66. What are the advantages of nanoparticles in drug delivery system

67. Dendrimers

68. What are the factors affecting gastric retention in gastrorententive drug delivery

69. Write any four routes of ocular drug delivery

70. Write advantages of nasal spray.

71. Write biological factors influencing controlled release drug delivery systems

72. What are ideal characters of polymers

73. Write note on surface modified microparticulate drug delivery systems

74. Write types of rectal drug delivery system

75. Write the methods of microencapsulation

76. State factors affecting mucoadhesion

77. State various system of transdermal drug delivery

78. Monoclonal antibodies

79. Write novel ocular formulations

80. State advantages of contraceptive patches

81. Applications of controlled drug delivery systems

82. What are smart polymers

83. Write the two polymerisation techniques

84. What are theories of mucoadhesion

85. What are the layers of Skin

86. Advantages of Metered dose inhalers

87. Define targeted drug delivery systems

88. Write two important strategies for targeting

89. Write various approaches overcome ocular barriers to drug delivery

90. Write briefly on contraceptive implants.

91. Write biological factors influencing controlled release drug delivery systems

92. What are ideal characters of polymers

93. Write note on surface modified microparticulate drug delivery systems

94. Write types of rectal drug delivery system

95. Write the methods of microencapsulation

96. State factors affecting mucoadhesion

97. State various system of transdermal drug delivery

98. Monoclonal antibodies

99. Write novel ocular formulations

100. State advantages of contraceptive patches