

**Note:** This question paper consist of following three parts:

**Part A: Attempt all 20 multiple choice questions. Each question carries 01 marks. [20X1=20]**

**Part B: Attempt any 02 Long answer questions out of 03 questions. Each question carries 10 marks. [2X10=20]**

**Part C: Attempt any 07 short answer questions out of 09 questions. Each question carries 05 marks. [7x5=35]**

**Part A: Attempt all 20 multiple choice questions. Each question carries 01 marks. [20X1=20]**

**1. SEDDS produce \_\_\_\_\_ after administration**

- a) Emulsions
- b) Flocculated Suspension
- c) Deflocculated Suspension
- d) None of these

**2. Response Surface Method**

- 1) Is used to find the optimum response
- 2) the response surface can be visualized graphically
- 3) cannot give maximum information with minimum experimentation

**Select correct option from the following**

- a) For RSM 1&2 is incorrect and 3 is correct
- b) For RSM 1&2 is correct and 3 is incorrect
- c) For RSM 1, 2 and 3 all are correct
- d) For RSM 1, 2 and 3 all are in correct

**3. Delphi method is adopted for**

- a) TQM
- b) Sales forecasting
- c) Diffusion study
- d) None of above

**4. \_\_\_\_\_ are used to improve the oral bioavailability of poorly water-soluble compounds**

- a) Complexation of cyclodextrin
- b) Self-microemulsifying drug delivery systems
- c) Micellar solubilization
- d) All of the above

**5. Premature breakdown of enteric coat is \_\_\_\_\_ type drug excipient interaction.**

- a) Physical Interaction
- b) Chemical Interaction
- c) Biopharmaceutical interaction
- d) Thermal Interaction

**6. In process of optimization constrain is**

- a) Response
- b) Parameter
- c) Limitation
- d) Principle

**7. The c in c GMP stands for**

- a) Current
- b) Content
- c) Carrier
- d) Commitment

**8. The sequence of events that occur during tablet compression?**

- a) Ejection, Decompression, Main compression, Pre compression

b) Ejection, Decompression, Pre compression, Main compression

c) Decompression, Pre compression, Main compression, Ejection

d) Pre compression, Main compression, Decompression, Ejection

**9. In optimization RSM stands for**

- a) Repair Surface Method
- b) Response Surface Method
- c) Response Standard Method
- d) Response Surface Margin

**10. Which one of these is responsible for hardness of tablet?**

- a) Die Filling
- b) Compression force
- c) Both (a) & (b)
- d) None of these

**11. Plating of punch faces is done by:**

- a) Chromium
- b) Zinc
- c) Iron
- d) Any of the above

**12. \_\_\_\_\_ is directly compressible excipient**

- a) Spray Dried lactose
- b) Dibasic calcium phosphate
- c) None of the above
- d) Any of the above

**13. Reverse osmosis is one of the techniques used for?**

- a) Tablet compression
- b) Capsule filling
- c) Water purification
- d) Drying

**14. Regulatory basis of process validation is available in:**

- a) FDA
- b) USP
- c) IP
- d) BP

**15. Equipment Validation must be always done by?**

- a) User
- b) Vendor
- c) Manufacturer
- d) Dealer

**16. What does the initial PQ stands for:**

- a) Performance qualification
- b) Purity qualification
- c) Process qualification
- d) Pressure qualification

**17. What are the benefits of TQM:**

- a) Cost saving
- b) Increase in profit
- c) Faster time to market
- d) all of above

**18. Which is not an element of TQM:**

- a) trust
- b) leadership skill
- c) rivalry
- d) team effort

**19. In Peppas model X axis shows**

- a) time
- b) Log time
- c) % drug release
- d) Cumulative % drug release

**20 Full form of SEDDS & SMEDDS are**

- a) A Self-microemulsifying drug delivery systems & Self-emulsifying drug delivery systems
- b) B Self-emulsifying drug delivery systems & Self-microemulsifying drug delivery systems
- c) C Super emulsifying drug delivery systems & Super microemulsifying drug delivery systems
- d) D None of the above

**Part B: Attempt any 02 Long answer questions out of 03 questions. Each question carries 10 marks. [2X10=20]**

Q1. Explain the forces involved during tablet compression.

Q2. Write a detail note on GMP.

Q3. What is the objective of preformulation studies. How Drug-Excipient compatibility studies are performed by TGA, DSC, FTIR etc.?

**Part C: Attempt any 07 short answer questions out of 09 questions. Each question carries 05 marks. [7x5=35]**

Q1. Write a note on Types of validation

Q2. Explain URS

Q3. Write in detail about ANOVA

Q4. What is diffusion and dissolution methods of drug release?

Q5. Write the full form of SMEDDS & SEDDS and discuss its applications.

Q6. Discuss various types of drug excipient interaction.

Q7. Write a note on stability of dispersed systems

Q8. Explain what is optimization & discuss its applications in field of pharmacy?

Q9. Write note on factorial design approach.