

Sample Questions- M Pharm Sem I Modern Pharmaceutics

1. High Throughput Screening & Virtual Screening methods are used for-
 - A. Solubility determination
 - B. Choice of promising drug candidate
 - C. Accelerated stability studies
 - D. Study of polymorphism
2. The amount of moisture absorbed by a substance can be measured by-
 - A. Hot stage microscopy
 - B. Karl Fisher titration
 - C. Differential scanning calorimetry
 - D. Laser diffraction
3. If Hausner's ratio is 1.25, the flow property is said to be
 - A. Fair
 - B. Moderate
 - C. Poor
 - D. Excellent
4. What is the main advantage of QbD?
 - A. Degradation pathway detection
 - B. Optimization of product & process
 - C. Economical
 - D. Specifications of raw materials
5. Sequence of steps in preformulation studies-
 - A. Literature survey – microscopy - solubility
 - B. Literature survey- solubility- organoleptic properties
 - C. Organoleptic properties- solubility - microscopy
 - D. Solubility – initial toxicity - microscopy
6. The noise in an experiment is contributed by
 - A. Control parameters
 - B. Unwanted, uncontrollable factors
 - C. Response variables
 - D. Signal enhancers
7. Independent variable is also called as-
 - A. Signal
 - B. Noise
 - C. Control
 - D. Response
8. A 2 x 3 factorial design is depicted as-
 - A. 3^2
 - B. 2^3
 - C. 2,3
 - D. 3,2
9. Simplex method is-
 - A. Used in factorial design
 - B. Is a model independent method

- C. Uses Latin square model
 - D. Builds response surface
10.is a fundamental property of powder.
- A. Bulk density
 - B. Porosity
 - C. Particle shape
 - D. Compressibility
11. In Heckel's plot, we have graph of –
- A. $\log_e(\text{porosity})$ with pressure
 - B. $\log_e(\text{compressibility})$ with pressure
 - C. $\log_e(\text{porosity})$ with volume reduction
 - D. $\log_e(\text{compressibility})$ with volume reduction
12. Solid bridges&Mechanical interlocking are mechanism of-
- A. Compaction
 - B. Decompression
 - C. Fragmentation
 - D. Bonding
13. The ability of a powder to deform under pressure is called as-
- A. Compactibility
 - B. Porosity
 - C. Compressibility
 - D. Consolidation
14. Which of the following is true-
- A. Fragmentation creates new surfaces
 - B. Porosity increases in transitional repacking
 - C. Bonding causes reduction in mechanical strength
 - D. Plastic deformation disappears completely upon release of stress.
15. Which of the following is used for size reduction of powders-
- A. Rapid mixer granulator
 - B. Fluid energy mill
 - C. Chilsonator
 - D. Cone blender
16. Shelf life is estimation of Reduction of _____ % concentration from its original Concentration.
- A.10
 - B.20
 - C.30
 - D.90
17. The Exaggerated temperature as per ICH is used in
- A. Toxicity study
 - B. Viscosity study
 - C. Accelerated stability study
 - D. Container Evaluation study

18. Which of the following is true for the resultant polymer product formed, when molecules of phthalic acid react with molecules of glycerol?

- A. branch polymer
- B. cross-link polymer
- C. linear polymer
- D. none of the mentioned

19. Which of the following is Chain Growth Polymer?

- A. Nucleic Acid
- B. Polystyrene
- C. Protein
- D. Starch

20. Polymer formation from monomers starts by

- A. condensation reaction between monomers
- B. coordination reaction between monomers
- C. conversion of monomers to monomer ion by protons
- D. hydrolysis of monomers

21. Following is hydrophilic polymer

- A. Carnuaba Wax
- B. Stearyl Alcohol
- C. HPMC
- D. Polyvinylchloride

22. How many Primary Batches are considered for Stability study

- A.3
- B.2
- C.1
- D.5

23. Which is correct ICH Guideline for Stability study

- A. ICHQ1
- B. ICH Q3
- C. ICH Q8
- D. ICH Q10

24. Which is correct stability Zone for UK

- A. Zone I
- B. Zone II
- C. Zone III
- D. Zone IV

25. Which is correct Accelerated Stability Condition for Products stored at refrigerated condition?

- A. $40^{\circ}\pm 2^{\circ}/75\%RH\pm 5\%$
- B. $25^{\circ}\pm 2^{\circ}/60\%RH\pm 5\%$
- C. $30^{\circ}\pm 2^{\circ}/85\%RH\pm 5\%$
- D. $50^{\circ}\pm 2^{\circ}/75\%RH\pm 5\%$

26. Indicate which of the following statements relating to the effect of pH on drug stability are true

- A. The rate of acid-catalysed decomposition of a drug increases with pH.
- B. The rate of base-catalysed decomposition of a drug increases with the concentration of hydroxyl ions.
- C. The effect of buffer components is not decomposition as acid–base catalysis.
- D. Plot of the observed-rate constant (as ordinate) against pH (as abscissa) for an acid-catalysed reaction has a gradient equal to $kH +$.

27. The Arrhenius equation for effect of temperature on the hydrolysis of a drug in aqueous solution

- A. predicts that the rate of reaction will decrease as temperature is increased
- B. predicts that a plot of $\log k$ against temperature will be linear
- C. predicts that a plot of $\log k$ against the reciprocal of temperature will be linear
- D. predicts that there will be no change in the order of reaction when temperature is increased

28. The time taken for 5% of a drug to decompose by first-order kinetics is:

- A. $0.022/k_1$
- B. $0.051/k_1$
- C. $0.105/k_1$
- D. $k_1 / 0.051$
- E. $0.105 k_1$

29. Drug release from a non-eroding hydrophilic matrix drug release involves:

- A. Coacervation
- B. Diffusion of Drug Through a Gel Layer
- C. Diffusion of Drug Through a Semipermeable Membrane

D. Passage of Drug Through Pores in the Matrix

30. Following is the Natural Polymer

A. Dextran

B. PLGA

C. PEG

D. PVC