

B.Pharm. (CBCS Pattern) Semester-VIII
BP812ET - Pharmaceutical Product Development

P. Pages : 3

Time : Three Hours



GUG/S/25/14157A

Max. Marks : 75

- 1. Multiple Choice questions any twenty. 20x1
=20**
- 1) Preclinical studies include
 - a) Preformulation study
 - b) Formulation Development
 - c) Drug Disposition study
 - d) All of the above
 - 2) Stages of pharmaceutical product development do not include
 - a) Preclinical study
 - b) INDA
 - c) GLP
 - d) NDA
 - 3) Which property measures the residence of a liquid to flow.
 - a) Density
 - b) Viscosity
 - c) Volume
 - d) Solubility
 - 4) Full form of CFR
 - a) Code of Federal Regulation
 - b) Center of Federal Regulation
 - c) Code of Formulation Regulation
 - d) Code of Federal Responsibility
 - 5) Disintegration time for sugar coated tablet is
 - a) 15 min
 - b) 60 min
 - c) 30 min
 - d) 5 min
 - 6) Which of the following is a test for evaluation of suppositories?
 - a) Melting point
 - b) Solidification test
 - c) Freezing point
 - d) Drying point
 - 7) Solute is not dissolved when it is added to
 - a) Solvent
 - b) Solution
 - c) Mixture
 - d) Reaction
 - 8) Which compound is used with 1,2-dibromoethane for the formation of glycol?
 - a) Na_2CO_3
 - b) NaHCO_3
 - c) NaOH
 - d) CH_3COONa
 - 9) The HLB system is used classify
 - a) Flavors
 - b) Colours
 - c) Surfactants
 - d) Perfumes
 - 10) Thiomersal is belongs to which category preservative
 - a) Acidic
 - b) Neutral
 - c) Mercurial
 - d) Quaternary ammonium compound

- 11) Suspended particles become flocculated in a suspension because
 - a) Particles are closely packed
 - b) Attractive forces between particles are appreciable
 - c) Repulsive forces between particles are appreciable
 - d) Vehicle rejects the particle
- 12) Wetting ability of vehicle is detected by observing?
 - a) Angle of repose
 - b) Contact angle
 - c) Critical angle
 - d) None of these
- 13) Near CMC, micelles of the surfactant molecules assume the shape of
 - a) Spherical
 - b) Layered
 - c) Rod shaped
 - d) Cylindrical
- 14) Solute s broken apart in to smaller particles & mixed evenly upon adding it to
 - a) Mixture
 - b) Solution
 - c) Solvent
 - d) None of these
- 15) The span materials tend to be less water soluble than the ---- materials. The same material could be a detergent, & a wetting agent
 - a) Carboxylate
 - b) Tween
 - c) Ampholytic elements
 - d) Surfactants
- 16) Which of the following is not a method of preparation of glycol?
 - a) Shells omega method
 - b) From carbon monoxide
 - c) From dimethyl
 - d) From nitrogen
- 17) Which of the following are widely used & excellent preservatives?
 - a) Mercurial
 - b) Quaternary ammonium compounds
 - c) Both a & b
 - d) Acidic
- 18) Powdered glass cannot be done for which type of glass material:
 - a) Treated soda-lime glass
 - b) Regular soda-lime glass
 - c) Borosilicate glass
 - d) General purpose soda-lime glass
- 19) Which of the following fatty acid used in water removable creams as emulsifier?
 - a) Stearic acid
 - b) Palmitic acid
 - c) None
 - d) Both a & b
- 20) Benzalkonium chloride is categorized as
 - a) Quaternary ammonium compounds
 - b) Neutral preservative
 - c) Acidic preservative
 - d) Mercurial preservative
- 21) Gum Arabic is a:
 - a) Anionic polysaccharide
 - b) Neutral polysaccharide
 - c) Cationic polysaccharide
 - d) None
- 22) Wetting ability of vehicle is detected by observing?
 - a) Angle of repose
 - b) Contact angle
 - c) Critical angle
 - d) None

23) Which of the following is a test for evaluation of suppositories?

- a) Melting point
- b) Solidification test
- c) Freezing point
- d) Drying point

2. Write **any two** questions:

**2x10
=20**

- a) Discuss the optimization parameters and different optimization techniques in formulation development.
- b) Explain in detail regulatory considerations in packaging of the pharmaceuticals.
- c) Explain in detail various aerosol products with examples.

3. Write **any seven** questions:

**7x5
=35**

- a) Applications of QbD.
- b) Suspending agents.
- c) Tablet coating.
- d) Various types of gelatin capsules.
- e) Semisolid preparations.
- f) Polyethylene glycol
- g) Labelling methods.
- h) Solubilizers in pharmaceutical formulations.
- i) Factorial design.
