



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Pharmacy

Course Name – Physical Pharmaceutics II

Course Code - BP403T

(Semester IV)

Time allotted : 1 Hrs.30 Min.

Full Marks : 75

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 75=75

Choose the correct alternative from the following :

- (1) How might solid sodium carbonate be obtained from sodium carbonate solution?
 - a) Centrifugation
 - b) Filtration
 - c) Evaporation
 - d) It cannot be extracted
- (2) What is the best description of blood?
 - a) Sol
 - b) Foam
 - c) Solution
 - d) Aerosol
- (3) Which one of the following systems has the smallest sized domains in its dispersed phase?
 - a) Nano emulsion
 - b) Coarse emulsion
 - c) Coarse suspension
 - d) Micro emulsion
- (4) The scattering of light by coarse and colloidal dispersed systems is known as?
 - a) Contrast matching
 - b) DLVO theory
 - c) Tyndall effect
 - d) Creaming
- (5) Which of the following is not a mechanism for the separation of a physically unstable suspension of magnesium hydroxide in water?
 - a) Flocculation
 - b) Aggregation
 - c) Ostwald ripening
 - d) Hydrolysis
- (6) EDTA is an example of one of the following ligand type:
 - a) Bidentate
 - b) Tetridentate
 - c) Unidentate
 - d) d.Hexadentate
- (7) Which of the following is a colloid?

- a) Vinegar
c) Muddy water
- b) Paint
d) Sugar solution
- (8) Which chemical aids in the clumping together of colloidal particles?
- a) Ion
c) Solvent
- b) Coagulant
d) Dispersed phase
- (9) In solutions particles are
- a) invisible
c) visible by ordinary microscope
- b) visible by naked eye
d) visible by electron microscope
- (10) Particle size in suspension is
- a) less than 10^3 nm
c) greater than 10^3 nm
- b) 10^2 nm
d) 10 nm
- (11) Colloids can:
- a) scatter light
c) absorb heat
- b) not scatter light
d) evolve heat
- (12) Which of these terms is not used to describe a solid which remains behind during a separation process?
- a) Gangue
c) Sediment
- b) Residue
d) Filtrate
- (13) Which of the following separations cannot be carried out using a centrifuge? The separation of ...
- a) salt from sea water
c) cream from milk
- b) water from wet clothes
d) red blood cells from plasma
- (14) A separation technique which involves charging particles and then attracting them to oppositely charged metal plates is called _____ separation.
- a) absorption
c) magnetic
- b) electrostatic
d) gravity
- (15) The principle method for measuring viscosity is;
- a) Capillary viscometer
c) b. Falling or rolling sphere viscometer
- b) Concentric cylinder viscometer
d) All of these
- (16) Materials whose consistency depends on the duration of shear as well as on the rate of shear, exhibit;
- a) Rheopexy
c) Viscoelasticity
- b) Thixotropy
d) Plasticity
- (17) Elastic deformation is described by;
- a) Hook's law
c) Empirical power law
- b) Newton's law
d) Stock's law
- (18) The ratio of relaxation time of a material to the time scale of a deformation is called;
- a) Reynolds number
c) Deborah number
- b) Weissenberg number
d) Mass number
- (19) The science of deformation and flow of matter is called _____
- a) Welding
c) Tapping
- b) Bending
d) Rheology
- (20) Consistency can be described as _____

- a) Viscosity
c) Breakability
- b) Elasticity
d) Viscosity and elasticity
- (21) Milk is a _____ fluid.
- a) Viscous
c) Visco-elastic
- b) Elastic
d) Extraneous
- (22) Property of fluid that describes its internal resistance is known as _____
- a) Viscosity
c) Resistance
- b) Friction
d) Internal energy
- (23) Stress strain relationship for a Newtonian fluid is _____
- a) Hyperbolic
c) Linear
- b) Parabolic
d) Inverse type
- (24) For non-Newtonian fluids, apparent viscosity is a function of _____
- a) Shear rate
c) Viscous rate
- b) Flow rate
d) Specific rate
- (25) Stokes is used for _____?
- a) Apparent viscosity
c) Shear viscosity
- b) Dynamic viscosity
d) Kinematic viscosity
- (26) A type of flow in which viscosity increases when the substance agitated is:
- a) Plastic
c) Dilatant
- b) Pseudoplastic
d) Thixotropy
- (27) Non-Newtonian flow can be described by using:
- a) Shear viscosity
c) Apparent viscosity
- b) True viscosity
d) None of these
- (28) In plastic system, below yield value, the apparent viscosity is:
- a) Lower
c) Equal
- b) Higher
d) Infinite
- (29) Relative viscosity can be determined by:
- a) Mac Michael viscometer
c) Ostwald viscometer
- b) Stormer viscometer
d) All of these
- (30) Two solutions are said to be isotonic if they exert same.....
- a) Viscosity
c) Osmotic pressure
- b) Surface tension
d) None of these
- (31) Heckel plot represents the following relationship:
- a) Apparent density vs compression pressure
c) Apparent density vs compression force
- b) Apparent mass vs compression pressure
d) Apparent mass vs compression force
- (32) The unit of rate of shear is _____
- a) cm. 1/sec
c) sec.1/cm
- b) 1/sec
d) cm.sec
- (33) For an ideal suspension the sedimentation value should be
- a) Equal to one
c) More than one
- b) Less than one
d) Zero
- (34) Tween 80 means

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- a) Polyoxyethylene sorbitan monolurate
c) Sorbitan monoolate
- b) Polyoxyethylene sorbitan monooleate
d) Sorbitan monosetarate
- (35) Anti foaming agent have HLB of
a) 6-9
c) 15-18
- b) 1-3
d) None of these
- (36) Flocculated suspensions have.....sedimentation value than that of deflocculated suspensions.
a) Higher
c) Equal
- b) Lower
d) Zero
- (37) Creep test is used to measure the viscoelastic properties of :
a) Ointment
c) Emulsion
- b) Suspension
d) Lotion
- (38) As per I.P room temperature means
a) 10 to 15°C
c) 15 to 25°C
- b) 15 to 20°C
d) 37°C
- (39) n an Emulsion complete separation of two phases is known as
a) Cracking
c) Phase separation
- b) Creaming
d) Sedimentation.
- (40) What is the percentage strength of a 4 in 10,000 solution?
a) 0.40%
c) 0.004%
- b) 0.04%
d) 4%
- (41) When fined oils are used in emulsion (dry gum method) the ratio of oil : water : gum is
a) 2:2:1
c) 4:2:1
- b) 3:2:1
d) 1:2:1
- (42) Cold cream is..... type of emulsion.
a) w/o type
c) both (a) and (b)
- b) o/w type
d) none of these
- (43) Hygroscopic powders
a) Liberate water
c) both (a) and (b)
- b) Absorb moisture
d) None of these
- (44) 'Shake well before use' is to be mentioned on the label of
a) Mouth washes
c) Elixirs
- b) Suspension
d) Tablet triturate
- (45) O/W and W/O type of emulsion can be differentiated by.
a) Miscibility test
c) Dye test
- b) Staining test
d) All of these
- (46) The type of emulsion depends on :
a) Emulsifying agent
c) Method of preparation
- b) Ratio of oil and water
d) Nature of oil
- (47) Naturally occurring emulsion is :
a) Egg yolk
c) Milk
- b) Latex
d) Sugar solution

- (48) Turpentine liniment is a
- W/O type of emulsion
 - O/W type emulsion
 - Solution
 - None of these.
- (49) Which one of these substances is suspending agent in calamine lotion
- ZnO
 - Bentonite
 - Sodium citrate
 - Glycerol
- (50) Flocculated suspension follows
- Plastic flow
 - Pseudoplastic flow
 - Dilatant flow
 - Newtonian flow
- (51) Emulsion have a shelf life
- Short
 - No
 - Large
 - None of these
- (52) Creaming is a..... process
- Reversible
 - Irreversible
 - A & B
 - Difficult to predict
- (53) Downward creaming means..... rate of sedimentation
- Negative
 - Positive
 - Same
 - No change
- (54) A mixture of span 20 and tween 20 forms..... type of emulsion
- W/O
 - O/W
 - Milky
 - Hard
- (55) Near CMC, micelles of the surfactant molecules assume the shape of
- Spherical
 - Layered
 - Rod shape
 - Cylindrical
- (56) Creaming in emulsion can be controlled by regulating
- Density of dispersed phase
 - Density of dispersion medium
 - Globule size
 - Volume of dispersion medium
- (57) On commercial scale, emulsions are prepared by
- Freezing
 - Homogenization
 - Centrifugation
 - Dialysis
- (58) The HLB system is used classify
- Flavours
 - Colors
 - Surfactants
 - Perfumes
- (59) Brownian movement of particle sedimentation
- Assist
 - Promote
 - Prevent
 - Increase
- (60) Pycnometer is used to determine
- Density
 - Refractive index
 - Angle of repose
 - Porosity
- (61) Carr's compressibility index gives an idea about
- Flow property of powders
 - Cohesiveness of powder
 - Both
 - None

- (62) Scattering of light is shown by
- Emulsion
 - Suspension
 - Colloidal particles
 - Homogenous solutions
- (63) Following is not used as a measure of flow property of powder
- Compressibility index
 - Angle of repose
 - Hausner's ratio
 - Bulk density
- (64) Micronization leads to increase in solubility of drug due to
- Increased porosity
 - Increased angle of repose
 - Increased surface area
 - Increased surface texture
- (65) Solubility of drug depends on following factors except....
- Dielectric constant
 - pH of solution
 - Pka of drug
 - Valency
- (66) Electrophoresis refers to
- Settlement of particles
 - Sedimentation of particles
 - Migration of particles to opposite electrode
 - Zig-Zag motion of particles
- (67) The instrument used to measure particle volume is:
- Microscope
 - Hempel Burette
 - Helium Densitometer
 - Coulter counter
- (68) Mercury displacement methods is used to determine:
- Granule density
 - Granule volume
 - Surface area
 - Granule size
- (69) Porosity of a porous powder can be defined as :
- Void volume/Bulk volume
 - True volume/Bulk volume
 - Bulk volume / Void volume
 - Bulk volume / True volume
- (70) Following is not the method for determining the surface area of particles
- Adsorption method
 - BET method
 - Mercury displacement method
 - Air permeability method
- (71) Which of the following apparatus is used to determine the particle size by gravity sedimentation method?
- Anderson pipette
 - Coulter counter
 - Pycnometer
 - Hempel burette
- (72) The type of particle diameter obtained by microscopic method of evaluation is:
- Projected diameter
 - Stoke's diameter
 - Surface volume diameter
 - Anti-Stoke's diameter
- (73) Dilatent flow is also known as:
- Shear thickening system
 - Yield value
 - Shear thinning system
 - Rheopaxy
- (74) Particle size distribution is important for-
- Derived property
 - property Fundamental
 - Bulk property
 - Chemical property
- (75) The biological half-life of a drug following first order kinetics is represented by-
- $1/k$
 - $0.693/k$
 - $\log k$
 - $2.303/k$