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 sus pension 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) Tetradentate
  c) Unidentate   d) d.Hexadentate

(7) Which of the following is a colloid?
  a) Vinegar   b) Paint
  c) Muddy water   d) Sugar solution

(8) Which chemical aids in the clumping together of colloidal particles?

a) Ion

b) Coagulant

c) Solvent

d) Dispersed phase

(9) In solutions particles are

a) invisible

b) visible by naked eye

c) visible by ordinary microscope

d) visible by electron microscope

(10) Particle size in suspension is

a) less than 10 to the power 3 nm

b) 10 to the power 2 nm

c) greater than 10 to the power 3 nm

d) 10 nm

(11) Colloids can:

a) scatter light

b) not scatter light

c) absorb heat

d) evolve heat

(12) Which of these terms is not used to describe a solid which remains behind during a separation process?

a) Gangue

b) Residue

c) Sediment

d) Filtrate

(13) Which of the following separations cannot be carried out using a centrifuge? The separation of ...

a) salt from sea water

b) water from wet clothes

c) cream from milk

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

b) electrostatic

c) magnetic

d) gravity

(15) The principle method for measuring viscosity is;

a) Capillary viscometer

b) Concentric cylinder viscometer

c) b.Falling or rolling sphere viscometer

d) All of these

(16) Materials whose consistency depends on the duration of shear as wheel as on the rate of shear, exhibit;

a) Rheopexy

b) Thixotropy

c) Viscoelasticity

d) Plasticity

(17) Elastic deformation is described by;

a) Hook's law

b) Newton's law

c) Empirical power 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

b) Weissenberg number

c) Deborah number

d) Mass number

(19) The science of deformation and flow of matter is called _____

a) Welding

b) Bending

c) Tapping

d) Rheology

(20) Consistency can be described as _____

a) Viscosity

b) Elasticity

c) Breakability

d) Viscosity and elasticity

(21) Milk is a _____ fluid.

a) Viscous

b) Elastic

c) Visco-elastic

d) Extraneous

(22) Property of fluid that describes its internal resistance is known as _____
  a) Viscosity
  b) Friction
  c) Resistance
  d) Internal energy

(23) Stress strain relationship for a Newtonian fluid is _____
  a) Hyperbolic
  b) Parabolic
  c) Linear
  d) Inverse type

(24) For non-Newtonian fluids, apparent viscosity is a function of _____
  a) Shear rate
  b) Flow rate
  c) Viscous rate
  d) Specific rate

(25) Stokes is used for _____?
  a) Apparent viscosity
  b) Dynamic viscosity
  c) Shear viscosity
  d) Kinematic viscosity

(26) A type of flow in which viscosity increases when the substance agitated is:
  a) Plastic
  b) Psudoplastic
  c) Dilatant
  d) Thixotropy

(27) Non-Newtonian flow can be described by using:
  a) Shear viscosity
  b) True viscosity
  c) Apparent viscosity
  d) None of these

(28) In plastic system, below yield value, the apparent viscosity is:
  a) Lower
  b) Higher
  c) Equal
  d) Infinite

(29) Relative viscosity can be determined by:
  a) Mac Michael viscometer
  b) Stormer viscometer
  c) Ostwald viscometer
  d) All of these

(30) Two solutions are said to be isotonic if they exert same.........
  a) Viscosity
  b) Surface tension
  c) Osmotic pressure
  d) None of these

(31) Heckel plot represents the following relationship:
  a) Apparent density vs compression pressure
  b) Apparent mass vs compression pressure
  c) Apparent density vs compression force
  d) Apparent mass vs compression force

(32) The unit of rate of shear is_____
  a) cm. 1/sec
  b) 1/sec
  c) sec.1/cm
  d) cm.sec

(33) For an ideal suspension the sedimentation value should be
  a) Equal to one
  b) Less than one
  c) More than one
  d) Zero

(34) Tween 80 means
  a) Polyoxyethylene sorbitan monolurate
  b) Polyoxyethylene sorbitan monoleate
  c) Sorbitan monoolate
  d) Sorbitan monosetarate

(35) Anti foaming agent have HLB of
  a) 6-9
  b) 1-3
  c) 15-18
  d) None of these

(36) Flocculated suspensions have………sedimentation value than that of deflocculated suspensions.

a) Higher
b) Lower
c) Equal
d) Zero

(37) Creep test is used to measure the viscoelastic properties of :
a) Ointment
b) Suspension
c) Emulsion
d) Lotion

(38) As per I.P room temperature means
a) 10 to 15°C
b) 15 to 20°C
c) 15 to 25°C
d) 37°C

(39) n an Emulsion complete separation of two phases is known as
a) Cracking
b) Creaming
c) Phase separation
d) Sedimentation.

(40) What is the percentage strength of a 4 in 10,000 solution?
a) 0.40%
b) 0.04%
c) 0.004%
d) 4%

(41) When fined oils are used in emulsion (dry gum method) the ratio of oil : water : gum is
a) 2:2:1
b) 3:2:1
c) 4:2:1
d) 1:2:1

(42) Cold cream is.................... type of emulsion.
a) w/o type
b) o/w type
c) both (a) and (b)
d) none of these

(43) Hygroscopic powders
a) Liberate water
b) Absorb moisture
c) both (a) and (b)
d) None of these

(44) 'Shake well before use' is to be mentioned on the label of
a) Mouth washes
b) Suspension
c) Elixirs
d) Tablet triturate

(45) O/W and W/O type of emulsion can be differentiated by.
a) Miscibility test
b) Staining test
c) Dye test
d) All of these

(46) The type of emulsion depends on :
a) Emulsifying agent
b) Ratio of oil and water
c) Method of preparation
d) Nature of oil

(47) Naturally occurring emulsion is :
a) Egg yolk
b) Latex
c) Milk
d) Sugar solution

(48) Turpentine liniment is a
a) W/O type of emulsion
b) O/W type emulsion
c) Solution
d) None of these.

(49) Which one of these substances is suspending agent in calamine lotion
a) ZnO
b) Bentonite
c) Sodium citrate
d) Glycerol

(50) Floculated suspension follows
a) Plastic flow
b) Pseudoplastic flow
c) Dialetent flow
d) Newtonian flow

(51) Emulsion have a .... shelf life

    a) Short
              b) No

    c) Large
              d) None of these

(52) Creaming is a.......... process

    a) Reversible
              b) Irreversible

    c) A & B
              d) Difficult to predict

(53) Downward creaming means........ rate of sedimentation

    a) Negative
              b) Positive

    c) Same
              d) No change

(54) A mixture of span 20 and tween 20 forms....... type of emulsion

    a) W/O
              b) O/W

    c) Milky
              d) Hard

(55) Near CMC, micelles of the surfactant molecules assume the shape of

    a) Spherical
              b) Layered

    c) Rod shape
              d) Cylindrical

(56) Creaming in emulsion can be controlled by regulating

    a) Density of dispersed phase
              b) Density of dispersion medium

    c) Globule size
              d) Volume of dispersion medium

(57) On commercial scale, emulsions are prepared by

    a) Freezing
              b) Homogenization

    c) Centrifugation
              d) Dialysis

(58) The HLB system is used classify

    a) Flavours
              b) Colors

    c) Surfactants
              d) Perfumes

(59) Brownian movement of particle .... sedimentation

    a) Assist
              b) Promote

    c) Prevent
              d) Increase

(60) Pycnometer is used to determine

    a) Density
              b) Refractive index

    c) Angle of repose
              d) Porosity

(61) Carr's compressibility index gives an idea about

    a) Flow property of powders
              b) Cohesiveness of powder

    c) Both
              d) d.None

(62) Scattering of light is shown by

    a) Emulsion
              b) Colloidal particles

    c) Suspension
              d) Homogenous solutions

(63) Following is not used as a measure of flow property of powder

    a) Compressibility index
              b) Hausner's ratio

    c) Angle of repose
              d) Bulk density

(64) Micronization leads to increase in solubility of drug due to

    a) Increased porosity
              b) Increased surface area

    c) Increased angle of repose
              d) Increased surface texture

(65) Solubility of drug depends on following factors except….

    a) Dielectric constant
              b) Pka of drug

c) pH of solution   d) Valency

(66) Electrophoresis refers to

   a) Settelment of particles   b) Migration of particles to opposite electrode
   c) Sedimentation of particles   d) Zig-Zag motion of particles

(67) The instrument used to measure particle volume is:

   a) Microscope   b) Helium Densitometer
   c) Hempel Burette   d) Coulter counter

(68) Mercury displacement methods is used to determine:

   a) Granule density   b) Surface area
   c) Granule volume   d) Granule size

(69) Porosity of a porous powder can be defined as :

   a) Void volume/Bulk volume   b) Bulk volume / Void volume
   c) True volume/Bulk volume   d) Bulk volume / True volume

(70) Following is not the method for determining the surface area of particles

   a) Adsorption method   b) Mercury displacement method
   c) BET method   d) Air permeability method

(71) Which of the following apparatus is used to determine the particle size by gravity sedimen
     tation method?

   a) Anderson pipette   b) Pycnometer
   c) Coulter counter   d) Hempel burette

(72) The type of particle diameter obtained by microscopic method of evaluation is:

   a) Projected diameter   b) Surface volume diameter
   c) Stoke's diameter   d) Anti-Stoke's diameter

(73) Dilatent flow is also known as:

   a) Shear thickening system   b) Shear thinning system
   c) Yield value   d) Rheopaxy

(74) Particle size distribution is important for-

   a) Derived property   b) Bulk property
   c) property Fundamental   d) Chemical property

(75) The biological half-life of a drug following first order kinetics is represented by-

   a) 1/k   b) log k
   c) 0.693/k   d) 2.303/k