



BRAINWARE UNIVERSITY
Term End Examination 2020 - 21
Programme – Bachelor of Pharmacy
Course Name – Industrial Pharmacy I
Course Code - BP502T

Semester / Year - Semester V

Time allotted : 90 Minutes

Full Marks : 75

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 75=75

1. *(Answer any Seventy five)*

(i) Which of the following is the Enantiotropic Polymorph?

- | | |
|------------|----------------------|
| a) Sulphur | b) Glyceryl stearate |
| c) Benzene | d) Sulphuric acid |

(ii) All of the following methods are used to identify polymorphs except...

- | | |
|-------------------------|-----------------------------|
| a) Hot stage microscopy | b) X-ray powder diffraction |
| c) Dilatometry | d) Gas chromatography |

(iii) All of the following methods are used to determine solubility except....

- | | |
|---------------------------|-------------------------|
| a) Turbidometric | b) Nephelometric method |
| c) Ultra-filtration LC/MS | d) FT-IR |

(iv) ICHQ3A guidelines provide specifications for...

- | | |
|------------------------------|----------------------------|
| a) Degradation of products | b) New dosage forms |
| c) Biotechnological products | d) Photostability of drugs |

(v) Which one is an exothermic reaction?

- | | |
|----------------|---------------------------|
| a) Desolvation | b) Solid-solid transition |
| c) Sublimation | d) Crystallization |

(vi) Potentiometric titration is used to determine the drug's...

- a) Partition-co-efficient
- b) Pka
- c) Solubility
- d) True density

(vii) Bragg's law is related to.....

- a) Diffraction
- b) Refraction
- c) Reflection
- d) All

(viii) Dissolution is affected by....

- a) Surface area
- b) Temperature
- c) Viscosity
- d) Both Surface area & Temperature

(ix) Carrier linked produgs release the active drug by hydrolytic cleavage which is triggered.....

- a) Only chemically
- b) Only enzymatically
- c) Either chemically or enzymatically
- d) None of these

(x) All of the followings are the packing properties of drug except...

- a) Molar volume and density
- b) Refractive index
- c) Conduxtivity electrical and thermal
- d) Solubility

(xi) Which of the following is the surface property of the drug?

- a) Stability
- b) Refractive index
- c) Rate of solid state reaction
- d) Surface free energy

(xii) Shake flask method is used to determine...

- a) Partition co-efficient
- b) Distribution co-efficient
- c) Both Partition co-efficient & Distribution co-efficient
- d) Pka

(xiii) TGA measures.....

- a) Changes in the sample weight as a function of time or temperature b) Heat loss or gain
- c) Both Changes in the sample weight as a function of time or temperature & Heat loss or gain d) Changes in the sample solubility as a function of time or temperature

(xiv) PEG 4000 is used as lubricant in tablet formulation in the concentration of...

- a) 0.25-5% b) 2-10%
- c) 1-2% d) 2-5%

(xv) Orange peel effect is related to...

- a) Hard gelatin capsules b) Film coating tablets
- c) Uncoated tablets d) Soft gelatin capsules

(xvi) Cam track guides the movement of....

- a) Die b) Punch
- c) Hopper d) Feed frame

(xvii) Spray dried lactose is especially prone to darkening in presence of excess moisture, amines, owing to presence of....

- a) Acetaldehyde b) Furaldehyde
- c) Formic acid d) Aceto-acetaldehyde

(xviii) Identify the super disintegrant in tablet preparation.

- a) Crosscarmellose b) Starch
- c) Tragacanth d) Agar

(xix) The temperature at which the inversion occurs depends on emulsifier concentration is known as

- a) Phage temperature b) Inversion temperature
- c) Phase inversion temperature d) Phase temperature

- (xx) Select the equation that gives the rate of drug dissolution from a tablet
- a) Fick's law
 - b) Henderson-Hasselbatch equation
 - c) Noyes-Whitney equation
 - d) MichelisMenton equation
- (xxi) A synthetic sweetening agent, that is approximately 200 times sweeter than sucrose and has no taste is.....
- a) Saccharin
 - b) Aspartame
 - c) Cyclamate
 - d) Sorbitol
- (xxii) Crown thickness of a tablet is measured by
- a) Micrometer
 - b) Pychnometer
 - c) Hydrometer
 - d) All of these
- (xxiii) Capping is prevented by using which of the following type of punches?
- a) Flat
 - b) Circular
 - c) Square
 - d) Rectangular
- (xxiv) Commonly used sweetening agent in Chewable tablet is.....
- a) Mannitol
 - b) Glucose
 - c) Lactose
 - d) Sucrose
- (xxv) What is primogel?
- a) Substituted HPMC for direct compression
 - b) Hydro gelling polymer for gel formation
 - c) Modified starch for disintegration
 - d) Modified MCC for direct compression
- (xxvi) Which one tablet doesnot require disintegrant?
- a) Effervescent
 - b) Sublingual tablet
 - c) Multi-layered tablet
 - d) Buccal tablet

(xxvii) All of the following are the causes of mottling except.....

- | | |
|---|--|
| a) Use of coloured drug along with colourless or white-coloured excipient | b) Migration of a dye to the surface of granulation while drying |
| c) Free rotation of either upper or lower punch during ejection of a tablet | d) Improper mixing of dye especially during direct compression |

(xxviii) Sealing of capsule is achieved by...

- | | |
|------------|---------|
| a) 100°C | b) 20°C |
| c) 37-40°C | d) 70°C |

(xxix) Which of the following is/ are the function(s) of fumaric acid in gelatin mass preparation?

- | | |
|---|---|
| a) Aid solubility | b) Reduce the aldehyde tanning of gelatin |
| c) Both aid solubility & reduction in the aldehyde tanning of gelatin | d) reduce chewable shell and taste |

(xxx) The optimum moisture content of the capsule shell is ranged between.....

- | | |
|-----------|----------|
| a) 12-15% | b) 7-10% |
| c) 5-25% | d) 3-8% |

(xxxi) The smallest size of capsules represented by.....

- | | |
|------|------|
| a) 0 | b) 1 |
| c) 2 | d) 5 |

(xxxii) All of the followings are water-soluble ingredients used for coating purpose in microencapsulation process except.....

- | | |
|--------------------|---------------|
| a) Ethyl cellulose | b) Gelatin |
| c) Starch | d) Gum arabic |

(xxxiii) In capsule fillig ROTOFIL is used for.....

- | | |
|---------------------------------|--------------------------------|
| a) Filling pellets into capsule | b) Filling powder into capsule |
|---------------------------------|--------------------------------|

c) Filling liquids into capsule

d) Sorting the filled capsule

(xxxiv) The disintegration time of hard gelatin capsule is

a) 30mins

b) 120mins

c) 60 mins

d) 180mins

(xxxv) Approximate capacity of capsule size 0 is...

a) 0.56ml

b) 0.75ml

c) 0.14ml

d) 0.95ml

(xxxvi) Bloom strength of gelatin gel is considered suitable for capsulation is...

a) 50-100g

b) 150-250g

c) 10-40g

d) 350-700g

(xxxvii) Type A gelatin exhibits an isoelectric point in the region of pH...

a) 4.7

b) 9

c) 7

d) 10

(xxxviii) All of the followings are model dependent methods to compare dissolution profile except...

a) ANOVA

b) Weibull model

c) Higuchi model

d) Korsmeyer Peppas model

(xxxix) Eli-Lilly is used to...

a) Direct filling of material

b) Indirect filling of material

c) Both Direct filling of material & Indirect filling of material

d) None of these

(xl) Identify the capsule weighing machine(s)..

a) Roto weight

b) Vericap 1200

c) Both Roto weight & Vericap 1200

d) Eli-Lilly

(xli) Which of the following method is used to manufacture hard gelatin capsule shell commercially?

- a) Dip-pin method
- b) Wet granulation method
- c) Dry granulation method
- d) Direct compression method

(xlii) Which of the following polyols used as humectants in creams-

- a) Glycerine
- b) Propylene glycol
- c) Sorbitol 70%
- d) All of these

(xliii) General storage temperature of water for injection is:

- a) 40?
- b) 50?
- c) 80?
- d) 10?

(xliv) Parenteral suspension dosage form cannot be administered by which of the following route?

- a) I.V route
- b) Ocular route
- c) I.M route
- d) Both I.V route & I.M route

(xlv) HEPA filter can remove the size of particle up to

- a) 0.3 micron
- b) 0.2 micron
- c) 0.1 micron
- d) 0.7micron

(xlvi) Where the filling and sealing of ampoules is carried out?

- a) Class 100 room
- b) Class 1000 room
- c) Class 10000 room
- d) Class 100000 room

(xlvii) LAL test is used for the detection of:

- a) pyrogen
- b) sterility
- c) clarity
- d) All of these

(xlviii) 1 % methylene blue solution is used for:

- a) Leak test
- b) Pyrogen test
- c) Clarity test
- d) Both Leak test & Pyrogen test

(xlix) Which of the followings is commonly used as a preservative in eye drops

- a) Propyl paraben
- b) Butylated hydroxyl toluene
- c) Phenol
- d) Benzalkonium chloride

(l) Which of the following parenteral container material shows the highest Gas permeation?

- a) Polypropylene
- b) Polystyrene
- c) Polyisoprene
- d) Neoprene

(li) Preliminary SHAM test is a part of:

- a) Rabbit test
- b) LAL test
- c) sterility test
- d) Both Rabbit test & sterility test

(lii) Water for injection is used as:

- a) Aqueous vehicle
- b) Non-aqueous vehicle
- c) Both Aqueous vehicle & Non-aqueous vehicle
- d) None of these

(liii) Ophthalmic solution is sterilized by

- a) Hot air oven
- b) Heating with bacteriocide
- c) Both Hot air oven & Heating with bacteriocide
- d) Bacterial filters

(liv) Viscosity enhancer in ophthalmic preparation is

- a) Poly vinyl alcohol
- b) Povidone
- c) Dextran
- d) Macrogol

(lv) The usual volume for intramuscular route of administration is

- a) 0.5-2ml
- b) 2-20ml
- c) 10-50ml
- d) 2-5ml

(lvi) Identify the limit of total solid content (as per GMP) in WFI:

- a) 10ppm
- b) 12ppm
- c) 17ppm
- d) 20ppm

(lvii) Identify the correct statement regarding WFI:

- a) Conductivity of WFI should not more than 1micromho
- b) Limit of solid content in WFI is 20ppm
- c) WFI is not pyrogen free
- d) WFI is not prepared by reverse osmosis

(lviii) Class 10000 clean room is preferable for which type of operation?

- a) Aseptic preparation and filling
- b) Preparation of solution to be filtered
- c) Background room conditions for activities requiring Grade A
- d) Handling of components after washing

(lix) Identify the air velocity of HEPA filter:

- a) 100 ± 20 ft/min
- b) 500 ± 20 ft/min
- c) 200 ± 20 ft/min
- d) 150 ± 20 ft/min

(lx) The first pharmaceutical aerosol was developed in the year of.....

- a) 1945
- b) 1949
- c) 1955
- d) 1960

(lxi) Identify the correct statement regarding ultrasonic nebulizer.

- a) It uses piezoelectric transducer to induce waves in a reservoir of solution
- b) It uses magnetic field to induce waves in a reservoir of solution
- c) It uses spinhaler to induce waves in a reservoir of solution
- d) It uses UV radiation to induce waves in a reservoir of solution

(lxii) Gasket in meter valve inhaler is composed of.....

- a) Buna-N
- b) Neoprene Rubber
- c) Both Buna-N & Neoprene Rubber
- d) Nylon

(lxiii) Which of the following test is performed for lipsticks?

- a) Breaking
- b) Wash-ability
- c) Elasticity
- d) None of these

(lxiv) The chemical name of Propellant 12 is.....

- a) Dichloro di fluoro methane
- b) Dichloro di fluoro ethane
- c) Dichloro di fluoro propane
- d) Dichloro tri fluoro methane

(lxv) Department of Transport Test (DOT) is performed for which of the following?

- a) Aerosols
- b) Glass containers
- c) Capsules
- d) None of these

(lxvi) Particle size of pharmaceutical aerosol is measured by.....

- a) Cascadeimpactor
- b) Light scatter decay
- c) K-F method
- d) Both Cascadeimpactor & Light scatter decay

(lxvii) The dip tube in an aerosol container is made of...

- a) Poly propylene
- b) Glass
- c) Aluminium
- d) Stainless steel

(lxviii) All of the followings are the examples of lipstick bases except

- a) Propylgallate
- b) Spermaceti
- c) Cocoa butter
- d) Beeswax

(lxix) Which of the following chemical have both anti-perspirant and deodorant

action?

- a) Aluminium carbonate
- b) Bariumsulphate
- c) Sodium chloride
- d) Coppersulphate

(lxx) Titanium dioxide is present in which type cream?

- a) Vanishing cream
- b) Ophthalmic cream
- c) Sunscreen cream
- d) Cleansing cream

(lxxi) Which one of the following propellant is used in the aerosol for oral use?

- a) Propane
- b) Ethane
- c) Methane
- d) Trichloro monofluoro methane

(lxxii) Aerosol packaging container must resist pressure of...

- a) 500 psig
- b) 140-180 psig
- c) 40 psig
- d) 20 psig

(lxxiii) The chemical name of Propellant 112 is.....

- a) Dichloro di fluoro methane
- b) Tetrachloro di fluoro ethane
- c) Dichloro di fluoro propane
- d) Dichloro di fluoro propane

(lxxiv) The chemical name of Propellant 113 is.....

- a) Dichloro di fluoro methane
- b) Trichloro tri fluoro ethane
- c) Dichloro di fluoro propane
- d) Dichloro di fluoro propane

(lxxv) Dichloro di fluoro methane is the chemical name of ...

- a) Propellant 12
- b) Propellant 212
- c) Propellant 102
- d) Propellant 122