Enrollment No……

Bachelor of Pharmacy

Third Semester Main Examination, Dec-2020

Pharmaceutical Organic Chemistry – II [BP301T]

Time: 3:00 Hrs **Max Marks 75**

Note : (i) All parts of the question paper are compulsory.

(ii) All question of each part to be attempt at one place.

Part-A

Q.1 Multiple Choice Questions. [1×20=20]

(i) How to choose a Sulfonating reagent?
(a) Minimize side reactions (b) Physical conditions
(c) Compound being sulfonated (d) All of the mentioned

(ii) Sulfone formation reduces by the use of ?
(a) Solvent (b) Solute
(c) Solution (d) None of the mentioned

(iii) Which of the following is an intermediate compound for the formation of Resorcinol?
(a) Phenol
(b) Benzene
(c) Aldehyde
(d) Ketone

(iv) What is meant by "hydrotropic" agents?
(a) Oxidizing (b) Reducing
(c) Solubilizing (d) None of the mentioned

(v) Sulfonation in the benzene hydrocarbon series gives polystyrene -
(a) True (b) False
(c) all are true (d) none of these

(vi) What product is produced on the nitration of the mononitro sulfonates?-
(a) Dinitrobenzenesulfonic acids . (b) Trinitrobenzenesulfonic acids.
(c) Tetranitrobenzenesulfonic acids (d) All of the mentioned

(vii) Which process is used to produce desired isomer in Naphthalene series?
(a) Sulfonation (b) Desulfonation
(c) Alkylation (d) Halogenation

(viii) Quinoline can be sulfonated to benzene nucleus in presence of?

(a) Oxime (b) Aoxy
(c) Oleum (d) Zinc

(ix) Sulphur trioxide is unsuitable for which compound?
(a) Saturated aliphatic compounds (b) Saturated aromatic compounds
(c) Unsaturated aliphatic compounds (d) Unsaturated aromatic compounds

(x) Complete the following reaction: ROH + H2SO4 ——> _____ + H20 ?:-

(a) R-SO3H (b) RO-SO3H
(c) R-SO3OH (d) RO-SO3OH

(xi) Phenolphthalein is obtained by heating phenol with conc. H2SO4 and which of the following reactant?
(a) Benzyl alcohol (b) Benzene
(c) Benzoic acid (d) Phthalic anhydride

(xii) Salicylaldehyde can be prepared from which of the following reactants?
(a) Phenol and chloroform (b) Phenol, chloroform and sodium hydroxide
(c) Phenol, carbon tetrachloride and NaOH (d) Phenol, carbon tetrachloride.

(xiii) When phenol is treated with excess of bromine water, it gives which of the following product?
(a) m-bromophenol
(b) o-and p-bromophenol
(c) 2,4-dibromophenol
(d) 2,4,6-tribromophenol

(xiv) Phenol reacts with bromine in carbon disulphate at low temperature to give which of the following product?
(a) m-bromophenol
(b) o-and p-bromophenol
(c) p-bromophenol
(d) 2,4,6-tribromophenol

(xv) Bromine reacts with phenol and decolorize orange color and turns it to which of the colored precipitate?
(a) white precipitate (b) pink precipitate
(c) blue precipitate (d) black precipitate

(xvi) Which of the following regents may be used to distinguish between phenol and benzoic acid?
(a) Aqueous NaOH (b) Tollen's reagent
(c) Molisch reagent (d) Neutral FeCl3

(xvii) What is the major product obtained on interaction of phenol with sodium hydroxide and carbon dioxide?
(a) Benzoic acid (b) Salicyladehyde
(c) Salicylic acid (d) Phthalic acid

(xviii) Picric acid is formed when phenol react with which of the following reactant?

(a) Formaldehyde (b) Hydrogen
(c) Nitric acid (d) Hydrochloric acid

(xix) Bakelite is formed when phenol react with which of the following reactant?
(a) Formaldehyde (b) Hydrogen
(c) Nitric acid (d) Sulphuric acid

(xx) Phenol undergoes ionization to become more stable by reacting with which of the following chemical species?
(a) negative ions (b) positive ions
(c) radicals (d) neutral atoms

Part-B

Short answer questions. [5×7 = 35]
Note : short answers type questions. (any seven)

Write short note on :

Q.1 Baeyer's Stain theory..

Q.2 Structure and medicinal uses of Di-phenyl-methane
Q.3 Saponification.
Q.4 Aromatic acids.
Q.5 Fatty acids.
Q.6 Saponification and rancidity of oils.
Q.7 Cyclo alkanes.
Q.8 Nuclear hydrocarbon.

Part-C

Long answer questions [2×10 = 20]
Note : Attempt Long answers type questions. (any two).

Q.1 Write the General Method of preparation of Cycloalkane with reaction..

Q.2 Give the Synthesis, reaction, and uses of naphthalene and anthracene.

Q.3 Write the General Method of preparation of Aromatic amines with reaction

Enrollment No……

Bachelor of Pharmacy

Third Semester Main Examination, Dec-2020

Physical Pharmaceutics -I [BP302T]

Time: 3:00 Hrs **Max Marks 75**

Note : (i) All parts of the question paper are compulsory.
(ii) All question of each part to be attempt at one place.

Part-A

Q.1 Multiple Choice Questions. [1×20=20]

(i) The Solubility of substance depends on the……
(a) Solvent Used (b) Temperature
(c) Pressure (d) All of the Above

(ii) 2. _____ is the ratio of the mean residence
(a) Absorption Number (b) Dissolution Number
(c) Dose Number (d) Intrinsic Dissolution

(iii) Fick's law is used for study of……
(a) Dissolution rate
(b) Disintigration rate
(c) Dissociation rate
(d) Diffusion rate

(iv) which of the following is also known as supercooled liquids?
(a) Amorphous Solid (b) Ionic Solid
(c) Molecular Solids (d) Crystalline Solid

(v) The refractive Index of a material depends upon…….
(a) Wavelength of light (b) Temperature
(c) Nature of material (d) None of these

(vi) Apparatus used to determine surface Tension of liquid is……..
(a) Capillary tube Viscometer (b) Du Nouy tensiometer.
(c) Rotometer (d) Rheometer

(vii) EDTA is ……..

(a) Ethylene diamine tetra acetic acid (b) Ethylene diamine tri acetic acid
(c) Ethylene dicarboxylique tri acetic acid (d) Ethyl dibutyl tri acetic acid

(viii) In term pH, H indicates……..
(a) Hydrogen (b) Helium
(c) Haemoglobin (d) Half

(ix) The solution having Osmotic pressure greater than that of 0.9% w/v sodium chloride is called……
(a) Hypertonics Solution (b) Hypotonic solution
(c) Isoosmotic Solution (d) Isotonic solution

(x) USP Apparatus 5 is……
(a) Flow-through-cell (b) Paddle over disk
(c) Cylinder (d) Paddle

(xi) Surface Tension of Liquid _____ with increase in temperature?
(a) Decrease (b) Increase
(c) No Change (d) None of the Above

(xii) Stalagmometer is used to determine……..
(a) Viscosity (b) Particle size
(c) Solubility (d) Surface Tension

(xiii) Dipole Moment is used…….
(a) For Predicting the nature of molecules
(b) Degree of polarity
(c) Shapes of molecules
(d) All of the Above

(xiv) The Unit of Surface tension is…….
(a) N/m2
(b) Kg.cm
(c) Dynes/cm
(d) Dynes/m2

(xv) Ligands with Multiple Binding sites are called…….
(a) Unidentate (b) Bidentate
(c) Polydentate (d) Hexadentate

(xvi) Which of the following is unidentate ligand
(a) Ammonia (b) Oxalate ion
(c) EDTA (d) Ethylene diamine

(xvii) The tonicity of Solution can be determined by……..
(a) Colorimetric method (b) Haemolytic Method
(c) Coligative method (d) Both B & C

(xviii) Velocity of light is maximum in ……..

(a) Diamond (b) water
(c) Vaccum (d) Glass

(xix) When solid changes to liquid is called…….
(a) Melting (b) Condensation

(c) Sublimation (d) Vapourization

(xx) The mass transfer of molecules in a substance from higher concentration to lower concentration is……..
(a) Diffusion (b) Osmosis
(c) Active transport (d) Passive transport

Part-B

Short answer questions. [5×7 = 35]
Note : short answers type questions. (any seven)

Q.1 Write factor influencing solubility of Drugs.
Q.2 Describe in detail the properties of liquid
Q.3 Write Application of Refractive Index
Q.4 BET Equation.
Q.5 Application of Buffer in Pharmacy.
Q.6 Different method used for measurement of ph.
Q.7 Application of Complexation in Pharmacy.
Q.8 Write note on Langmuir Adsorption Isotherm

Part-C

Long answer questions [2×10 = 20]
Note : Attempt Long answers type questions. (any two).

Q.1 Describe in detail Basket Apparatus & Paddle Apparatus.

Q.2 Define Polymorphism and its Classification. What are the different method used for characterization of polymorphism.

Q.3 Define Complexation. What are the types of complexs? Write detail About Inclusion Complexes.

Enrollment No……

Bachelor of Pharmacy

Third Semester Main Examination, Dec-2020

PHARMACEUTICAL MICROBIOLOGY -III [BP303T]

Time: 3:00 Hrs **Max Marks 75**

Note : (i) All parts of the question paper are compulsory.
(ii) All question of each part to be attempt at one place.

Part-A

Q.1 Multiple Choice Questions. [1×20=20]

(i) According to Pasteur statements which one of the following is true
(a) Living organisms discriminate between stereoisomers
(b) Fermentation is a aerobic process
(c) Living organisms doesn't discriminate between stereoisomers
(d) Both a and b

(ii) "I found floating therin earthly particles, some green streaks, spirally wound serpent-wise, and orderly arranged, the whole circumstance of each of these streaks was abut the thickness of a hair on one's head"…. These words are of
(a) Leeuwenhoek
(b) A. Jenner
(c) Pasteur

(d) Koch

(iii) The principle light- trapping pigment molecule in plants, algae, and cyanobacteria is (a) Chlorophyll
(b) Chlorophyll
(c) Porphyrin
(d) Rhodapsin

(iv) In a fluorescent microscope the objective lens is made of?
(a) Glass (b) Quartz
(c) Polythene (d) None of these

(v) Fixation of atmospheric nitrogen is by means of
(a) Biological process
(b) Lightining
(c) Ultraviolet light
(d) All of the above

(vi) Which one of the following fungi is the most serious threat in a bone marrow transplant unit?
(a) Candida albicans
(b) Aspergillus
(c) Blastomyces
(d) Cryptococus

(vii) Which is the following enzyme acts as a spreading factor?
(a) Hyaluronidase
(b) Coagulase
(c) Catalase
(d) DNase

(viii) Vibrio Cholerae was discovered by
(a) Koch
(b) Metchnikoff
(c) John Snow
(d) Virchow

(ix) *E.coli* was first isolated by
(a) Louis Pasteur
(b) Escherich
(c) Shiga
(d) Robert Koch

(x) Mycobacterium tuberculosis was first discovered by
(a) Robert Koch
(b) Edward Jenner
(c) Louis Pasteur
(d) None of these

(xi) The functions of plasmid are
(a) DNA replication
(b) Protein synthesis
(c) Cell wall synthesis

(d) None of the above

(xii) Mycoplasmas are bacterial cells that
(a) Fail to reproduce on artificial meida
(b) Have a rigid cell wall
(c) Are resistant to penicillin
(d) Stain well with Gram's stain

(xiii) The etiologic agent of botulism is a
(a) Neurotoxin
(b) Endotoxin
(c) Enterotoxin
(d) All of the above

(xiv) An organism that is osmophilic and has a specific requirements for sodium chloride resembles
(a) Halophile
(b) Basophile
(c) Barophile
(d) Xerophile

(xv) A population of cells derived from a single cell are called
(a) Monclonal cells
(b) Clones
(c) Protoplasts
(d) Sub culture

(xvi) Bacteria that are respons ib le for fermentation of dairy milk are
(a) Azetobacter
(b) Rhizobium
(c) Lactobacillus
(d) Hay bacillus

(xvii) The fungal disease that affect the internal organs and spread through the body are called
(a) Mycoses
(b) Systemic mycoses
(c) Mycotoxicosis
(d) Superficial mycoses

(xviii) The staining technique used to stain the metachromatic granules of Corynebacterium
(a) Giemsa stain
(b) Alberts stain
(c) Acid fast staining
(d) Both a and b

(xix) Which one of the following bacteria has found extensive use in genetic engineering work in plants?
(a) *Clostridum septicum*
(b) *Xanthomonas oriza*
(c) *Bacillus coagulens*
(d) *Agrobacterium tumefaciens*

(xx) Maximum application of animal cell culture technology today is in the production of

(a) Insulin
(b) Interferons
(c) Vaccines
(d) Edible proteins

Part-B

Short answer questions. [5×7 = 35]
Note : short answers type questions. (any seven)

Q.1 Define the sterilization. Explain the different types of sterilization method?
Q.2 Define the evaluation of bactericidal & Baeferiostatic ?
Q.3 Define the term of Spoilage, explain the factor affecting the microbial spoilage of pharmaceutical product?
Q.4 What is BOD and COD?
Q.5 Explain different method of cultivating virus with their advantage and disadvantage?
Q.6 Explain the gram negative AND positive Bacteria?
Q.7 Explain the general characteristics and classification of viruses?
Q.8 Explain the general characteristics of micro organizing?

Part-C

Long answer questions [2×10 = 20]
Note : Attempt Long answers type questions. (any two).

Q.1 Explain the method for stability testing of anequs parantral solution as per IP?.

Q.2 Write above construction and operation of an autoclave with a need diagram?.

Q.3 Explain in detail principal and working of compound microscope?.

Enrollment No……

Bachelor of Pharmacy
Third Semester Main Examination, Dec-2020
Pharmaceutical Engineering -III [BP304T]

Time: 3:00 Hrs **Max Marks 75**

Note : (i) All parts of the question paper are compulsory.
(ii) All question of each part to be attempt at one place.

Part-A

Q.1 Multiple Choice Questions. [1×20=20]

(i) Which of the following is not type of flow meters
(a) Orifice meter
(b) Pitot tube
(c) Potentiometer
(d) Rotemeter

(ii) Ball mill is used for
(a) Attrition
(b) Very fine grinding
(c) Coarse grinding
(d) Both a and c

(iii) Size Reduction is also known as
(a) Communication
(b) Compaction
(c) Segregation
(d) Seperation

(iv) In Ball mill, maximum Size reduction is obtain at
(a) Low Speed (b) Very High Speed
(c) Critical Speed (d) High Speed

(v) Borosilicate glass is also known as
(a) Type I
(b) Type II
(c) Type III
(d) Type IV

(vi) Which of the following is of cast iron alloys available in market
(a) Duriron
(b) Durichlor
(c) Both a and b
(d) Duraderm

(vii) Filters having pore size_____ are used to remove virus particle from water or air is
(a) 0.010 to 0.10 microns
(b) 0.30 to 0.65 microns
(c) 0.65 to 0.95 microns
(d) Up to 1.5 microns

(viii) Corrosion can be Prevent by
(a) Use of corrosion Inhibitor
(b) Coating and Lining
(c) By changing the environment
(d) All of the Above

(ix) The biological corrosion is due to
(a) Changing resistance to surface film
(b) Devoping corrosive environment
(c) Altering rate of anodic/cathodic reaction
(d) All of the above

(x) Transport of material in pneumatic Conveyors done through
(a) Air
(b) Screw
(c) High Velocity of Air
(d) Belt

(xi) Addition of_____ Produce amber colored glass
(a) Iron Oxide
(b) Zinc Oxide
(c) MgO
(d) Aluminum oxide

(xii) Material Used as Lining material
(a) Plastic
(b) Latex

(c) Iron
(d) Glass

(xiii) Cyclone Separator is based on the principle of
(a) Centrifugal force
(b) Hydrogen force
(c) Internal Force
(d) None of these

(xiv) The transfer of thermal heat is transfer from hot place to cold place in same material is
(a) Conduction (b) Convection
(c) Radiation (d) Evaporation

(xv) Which of the following factors do not affect rate of evaporation
(a) Temperature of liquid
(b) Humidity of surrounding air
(c) Depth of liquid
(d) Surface of liquid

(xvi) Evaporation takes place at
(a) All temperature
(b) Freezing Point
(c) Melting Point
(d) Boiling Point

(xvii) The enzyme, vitamins, glycoside and alkaloids are extracted by
(a) Steam Distillation
(b) Flash Distillation
(c) Vacuum distillation
(d) Distillation under reduce pressure

(xviii) Which of the following is not a filter aid
(a) Diatomaceous earth
(b) Perlite
(c) Cellulose
(d) Cotton

(xix) Which of the following factors influence rate of filtration
(a) Surface area
(b) Viscosity of filtrate
(c) Pressure drop
(d) All of above

(xx) Which of the following evaporator is also known as Rising Film Evaporator
(a) Horizontal tube evaporator
(b) Steam jacked kettle
(c) Climbing film evaporator
(d) Forced circulation evaporator

Part-B

Short answer questions. [5×7 = 35]
Note : Attempt any seven

Q.1 Define evaporation and Distillation. Write their objective and application
Q.2 Write the mechanism of heat transfer.
Q.3 Define size reduction and write the factors affecting of size reduction

Q.4 Write the types of corrosion and there prevention?
Q.5 Write the objective, principle and application of centrifugation
Q.6 Write the principle and working of fluidized bed dryer
Q.7 Explain about Climbing Film evaporator in brief
Q.8 Explain Cyclone Separator and Air Separator

Part-C

Long answer questions [2×10 = 20]

Note : Attempt Long answers type questions. (any two).

Q.1 Write the objective, principle, construction, working and pharmaceutical use of Ball mill.

Q.2 Write long note on:
(a) Double Cone Blender (b) Flash distillation

Q.3 Define Flow of Fluids and explain Bernoulli's theorem with its application.