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 Marks]

(i) What is Huckel's rule?
(a) 3n+2 (b) 4n+2
(c) 2n+2 (d) 1n+2

(ii) Hydroxybenzene also called as:
(a) Cresol (b) Quinol
(c) Phenol (d) Resorcinol

(iii) Compounds which contain an –OH group in a side-chain attached to an aromatic ring are called:
(a) Phenol (b) Aromatic phenol
(c) Aromatic alcohol (d) None of the above

(iv) Which of the following test is not qualitative test for Phenols:
(a) Ferric chloride test (b) Melzer test
(c) Leak test (d) Lieber Mann test

(v) What is chemical formula of saccharin?
(a) $C_7H_6NO_3S$ (b) $C_7H_5NO_3S$
(c) $C_7H_4NO_3S$ (d) None of the above

(vi) What is chemical formula of Trichloroacetaldehyde?
(a) CCl_2CHO (b) CCl_3OH
(c) CCl_3CHO (d) CCl_4OH

(vii) Give an answer in one world which used in killing mosquito and other insects:
(a) Pain Killers (b) Insecticides
(c) Disinfectant (d) None of the above

(viii) Benzene structure are not drown possible as:
(a) Cyclic structure (b) Straight –chain structure
(c) Kekule's structure (d) None of the above

(ix) These (E^+) symbol is denoted as:
(a) Nucleophile (b) Electrophile
(c) Both (d) None of the above

(x) Aromatic characterization also called as:
(a) Basicity (b) Aromaticity
(c) Electricity (d) None of the above

(xi) DDT used for:
(a) Insecticide (b) Pesticides
(c) Both A and B (d) Non of these

(xii) Who give benzene structure?
(a) Kekule (b) Thomsan
(c) Madam curie (d) Edison

(xiii) The dihydroxy phenol also known as:
(a) Picric acid (b) Resorcinol
(c) Both a and B (d) Non of these

(xiv) The formula of cresol is:
(a) $C_6H_5OHHC_4$ (b) $C_6H_5OHCH_3$
(c) $C_6H_5OHCH_2$ (d) $C_6H_5OHCH_7$

(xv) Napthelene nucleus show:
(a) 3 Benzene (b) 2 Benzene
(c) 4 Benzene (d) 5 Benzene

(xvi) Phenol react with which compound show picric acid
(a) Acetic Acid (b) Nitric Acid
(c) Benzoic acid (d) Sulphuric acid

(xvii) Sulphur trioxide in sulphuric acid is called_____, which is a very corrosive material.
(a) Oleum (b) Arenium ion
(c) Nitronium ion (d) Benzene

(xviii) The molecular formula of benzene is _____.

(a) C_6H_6 (b) C_6H_8

(c) C_6H_{10} (d) None of these

(xix) Salicylic acid is the precursor to_____-.

(a) Aspirin (b) Paracetamol

(c) None of these (d) Amines

(xx) Haloform reaction is used to prepare _____from methyl ketones.

(a) Carboxylic acids (b) Hydrochloric acid

(c) Sulphuric acid (d) None of these

Part-B

Short Answer type Question [7x5=35]

Attempt any 7 questions. Each Carry five marks

Q.1 Write Friedel-craft alkylation reaction.

Q.2 Write a note on acidity of phenols.

Q.3 Write a note on basicity of amines.

Q.4 Write Baeyer-Villiger Oxidation reaction.

Q.5 Write synthesis and chemical reactions of naphthalene.

Q.6 Give any two reactions of cyclopropane and cyclobutane.

Q.7 Explain Huckels rule for aromaticity with suitable example.

Q.8 Electrophilic substitution reaction of aromatic amines.

Part-C

Long Answer Type Question [2x10=20]

Attempt any 2 questions. Each carry Ten marks

Q.1 Write detail note on effect of substituents on reactivity and orientation of mono substituted benzene compounds toward electrophilic substitution reaction.

Q.2 Write a note on structure and uses of phenol, cresol and resorcinol.

Q.3 Write a note on basicity, method of preparation and chemical reactions of aromatic amines.

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 Marks]**

(i) An Azetropic mixture of two liquids boils at lower temperature than either of them when
(a) It shows negative deviation from Raoult's law
(b) It shows positive deviation from Raoult's law
(c) It is Metastable
(d) It is saturated

(ii) The solubility of gases increases in liquid with increasing
(a) Mass (b) Volume
(c) Temperature (d) Pressure

(iii) Normal pH of blood is
(a) 7.4 (b) 7.2 (c) 7.1 (d) 7.0

(iv) Buffer Capacity is the maximum at
(a) pKa = pH (b) pKa< pH
(c) pka = Concentration (d) pka> pH

(v) At Constant temperature the solubility of gas in a liquid is proportional to the pressure of the gas above it is called as
(a) Roult's law (b) Graham's law
(c) Henry's law (d) Charle's Law

(vi) The Amorphous form of drug dissolves than the crystalline form
(a) Faster (b) Slower
(c) Equal to one (d) Does not dissolve

(vii) Wetting agents usually have an HLB value in the ranges
(a) 8-16 (b) 9-12
(c) 0-3 (d) 7-9

(viii) The pKw at 25°C is
(a) 14.0 (b) 10 (c) 5.0 (d) 7

(ix) Pair of liquids that are miscible in all proportions are known as
(a) Binary liquids (b) Polar liquids
(c) Concentrated liquids (d) Saturated liquid

(x) Interfaces are important in
(a) Tablets (b) Pastes
(c) Suspensions (d) Emulsion

(xi) Example of chelate
(a) PVP-Iodine (b) Cyclodextrin
(c) Cisplatin (d) Haemoglobin

(xii) EDTA is an example of
(a) Unidentate (b) Bidentate
(c) Oxydentate (d) Multidentate ligand

(xiii) Versatile complexometric agents.
(a) Iodine
(b) Ethylene diamine tetra acetic acid (EDTA)
(c) Sodium hydroxide
(d) Hydrochloric acid

(xiv) Which sentence is false about ligand?
(a) It is act like lewis base
(b) CN^{-} is example of unidentate.
(c) It is electron donor group.
(d) EDTA is example of unidentate.

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

(xvi) Which of the following isunidentate 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 type Question **[7x5=35]**
Attempt any 7 questions. Each Carry five marks

Q.1 Define Ideal solution and Real solution with the help Raoults Law?

Q.2 Write the methods for determine of surface Tension of Liquid.Explain two methods?

Q.3 Discuss in detail Properties of various State of Matter?

Q.4 Write Short Note On:
(i) Liquid Crystal
(ii) Eutectic Mixture
(iii) Triple Point

Q.5 What are Surfactants? Give Suitable Chemical Classification of Surfactants and mention their Important uses?

Q.6 Write Short Note on
(i) Surface Tension
(ii) Interfacial Tension

Q.7 How the Binding of Drugs to Protien can influence their Action.

Q.8 What do you mean by Elevation in Boiling Point?How is Molecular mass of Solute

Part-C

Long Answer Type Questions **[2x10=20]**

Attempt any 2 questions. Each carry Ten marks

Q.1 Define Polymorphism and its Classification. What are the different method used for characterization of polymorphism.

Q.2 Define Complexation. What are the types of complexs? Write detail About Inclusion Complexes.

Q.3 Explain Various Type of Crystal on the basis force of attraction Giving SuitableExample.

Enrollment No……

Bachelor of Pharmacy
Third Semester Main Examination, Dec-2020
Pharmaceutical Microbiology [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 Marks]**

(i) Cellulose are produced from
(a) S.cereviceae (b) Trichoderma Koningi
(c) A nigar (d) None of these

(ii) The raw material for citric acid production is
(a) Corn (b) Molasses
(c) Starch (d) None of these

(iii) Aspergillus niger is used generally for the production of
(a) Ethanol (b) Penicillin
(c) Citric acid (d) Lactic acid

(iv) Over heating of fermentator during fermentation is controlled
(a) Cooling jacket (b) Steam
(c) Cool air (d) None of these

(v) Antifoam agent is
(a) Silicon compounds (b) Corn oil
(c) Soyabean oil (d) All of these

(vi) The capacity of laboratory fermentors is
(a) 12–15 liters (b) 2000 gallons
(c) 500 liters (d) 10000 gallons

(vii) Different methods of strain improvement are
(a) Protoplast fusion (b) Recombinant DNA technique
(c) Genetic recombination (d) All of these

(viii) Sun ray fungus is
(a) Actinomyces irraeli (b) Chromoblastomycosis
(c) Streptomyces griseus (d) Cryptococcosis

(ix) Which agent on addition to a colony inhibits its growth and on removal the colony regrows is?
(a) Bacteriostatic (b) Bactericidal
(c) Antibiotic (d) Antiseptic

(x) β-lactum ring is present in
(a) Erythromycin (b) Penicillin
(c) Tetracyclins (d) Chloramphenicol

(xi) All of the following drugs act on cell membrane, except
(a) Novobiocin (b) Nystatin
(c) Chloromycetin (d) Colicins

(xii) Cycloserine related to the amino acid in structure
(a) Serine (b) Aspergine
(c) Alanine (d) None of these

(xiii) In Tuberculosis therapy mainly used antibiotic is
(a) Penicillin (b) Streptomycin
(c) Chloramphenol (d) Cycloserine

(xiv) The antibiotic produced from Bacillus subtilis is
(a) Vancomycin (b) Bactiracin
(c) Both a and b (d) None of these

(xv) Aldehydes, which are most powerful disinfectants
(a) Formaldehyde (b) Acetaldehyde
(c) Gluta aldehyde (d) Both a and c

(xvi) Accridine dyes are more effective against
(a) Gram positive (b) Gram negative
(c) Mycoplasmas (d) Rickttsiae

(xvii) Cultures are prepared by penetrating the inoculation loop with suspension into the medium, they are
(a) Stock cultures (b) Stabcultures
(c) Sub-cultures (d) None of these

(xviii) The principle involved in the streak plate method is
(a) Separation (b) Streaking
(c) Isolation (d) Dilution

(xix) Which virus was first observed?
(a) Hepatitis Virus (b) TMV
(c) Cauliflower mossaic virus (d) None of these

(xx) The most important energy-yielding reaction for an aerobic organism is

(a) Glycosis (b) EMP

(c) KDPG (d) Both b and c

Part-B

Short Answer Type Questions.

Note : Attempt Any Seven Questions. All Questions Carry Equal Marks.

Q.1 Explain the Binary Fission?

Q.2 Define the evaluation of bactericidal & Bacterio Static?

Q.3 Enlist the application of cell cultures.

Q.4 Detail description of Aseptic area and laminar from equipments.

Q.5 Define the Disinfectants?

Q.6 Define the vitamins?

Q.7 Explain the gram negative Bacteria?

Q.8 Explain the gram positive Bacteria?

Q.9 Explain the general characteristics of micro organizing?

Q.10 What is BOD and COD?

Part-C

Long Answer Type Questions.

Note : Note: Attempt Any Two Questions. All Questions Carry Equal Marks.

Q. 1 Define the sterilization. Explain the different types of sterilization method.

Q.2 Explain the general characteristics and classification of viruses.

Q.3 Explain in detail the importance and relieving of microbiology in pharmacy?

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.