Bachelor of Pharmacy Sixth Semester Examination, June-2021 Medicinal Chemistry-III [BP601T]

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-

[1x20 = 20 Marks]

- 1. Mercury catalyst does not function with which compound?
 - a) Aqueous acid
 - b) SO₃
 - c) Oleum
 - d) All of the Above
- 2. Which of the following is the correct characteristic of bio precursors/ metabolic precursors?
 - a) The inert carrier is attached through a chemical bond
 - b) There is no inert carrier
 - c) There is a change in pH while the formulation
 - d) The active drug is converted to its inert form chemically
- 3. Which bond should be between the active drug and inert carrier?



- a) Covalent bond
- b) Vander Waal's force
- c) Di-sulphide bond
- d) Ionic bond
- 4. What is a prodrug?

a) An excipient which helps in creating the environment for the drugdissolving

b) Chemically drug precursor

- c) Excipient of drug formulation
- d) A drug which is used by professionals
- 5. "Cascade lantentiation" concept takes into account which kind of prodrugs?
 - a) Mixed type prodrugs
 - b) Pro-prodrugs
 - c) Bioprecursors
 - d) Carrier linked prodrugs
- 6. The addition of mercury changes the orientation in a number of aromatic sulfonation reactions.
 - a) True
 - b) False
- 7. Why is the use of reaction solvents is important?
 - a) Efficient mixing
 - b) Uniform reaction
 - c) Reduce reaction temperature
 - d) Both efficient mixing and uniform reaction
- 8. Which of the following aromatic sulfonation is not an electrophilic substitution reaction?
 - a) Nitration
 - b) Halogenation
 - c) Alkylation
 - d) None of the mentioned
- 9. Prodrugs with two active compounds are known as _____
 - a) Mixed type prodrugs
 - b) Pro-prodrugs
 - c) Bioprecursors
 - d) Mutual prodrug
- 10. Which of the following is a true Sulfonating agent?
 - a) SO₃
 - b) H₃SO₄+
 - c) HSO₃+
 - d) All of the above
- 11. Which of the following is not a characteristic of ideal prodrug?a) Should rapidly transform, chemically and enzymatically forming the

active product

- b) Should have intrinsic pharmacological activity
- c) The vapour pressure should be less and evaporate easily

d) Apart from an active product, other metabolic fragments should be nontoxic

- 12. Which type of reaction is the heat of Sulfonation reaction?
 - a) Exothermic
 - b) Endothermic
 - c) Neutral
 - d) None of the mentioned
- 13. What is (dH)D?
 - a) Heat of Sulfonation
 - b) Heat of Dissociation
 - c) Heat of Deformation
 - d) Heat of Formation
- 14. Which is the earliest discovered prodrug?
 - a) Prontosil
 - b) Sulphanilamide
 - c) Aspirin
 - d) Salicylic acid
- 15. What do we denote Heat of Sulfonation with SO₃ vapour as?
 - a) dHv
 - b) dHD
 - c) dHc
 - d) dHf

16. The conversion of Ethylene to Ethanol is which type of reaction? a) Exothermic

- b) Endothermic
- c) Neutral
- d) None of the mentioned
- 17. Which of the following is an example of a mutual prodrug?
 - a) Prontosil is the prodrug for sulfanamide
 - b) Aspirin is the prodrug of salicylic acid
 - c) Benorylate prodrug for NSAIDs and paracetamol
 - d) Diesters pro-prodrug for pilocarpic acid

- 18. What is the use of Lauryl sulphate?
 - a) Foaming agent
 - b) Cleaning agent
 - c) Drying agent
 - d) Wetting agent

19. Complete the following reaction: $(CH_3)_2O + SO_3 \longrightarrow$.

- a) (CH₃)₂SO
- b) (CH₃)₂SO₂
- c) (CH₃)₂SO₃
- d) (CH₃)₂SO₄
- 20. How does Sulfonation differ from other reactions?
 - a) Reaction temperature
 - b) Reversible reaction
 - c) Both temperature and reversible reaction
 - d) None of the mentioned

Part-B

Q.2 Short answer questions. [5x7 = 35 Marks] Note : Attempt any seven questions. Each question carries 5 marks.

- 1) Write a short note on antiprotozoal agents.
- 2) Describe Anthelmintic
- 3) Describe Sulphonamides
- 4) Describe Tetracycline's
- 5) Describe Antibiotics
- 6) Describe Macrolides
- 7) Describe Prodrugs.
- 8) Describe QSAR

Part-C

Q.3 Long answer questions. [10x2 = 20 Marks] Note : Attempt any two questions. Each question carries 10 marks.

- 1) Explain in detail beta lactum antibiotics.
- 2) Describe etiology of malaria and give the classification of antimalarial drugs.
- 3) Describe antiviral agents and Give its classification.

Bachelor of Pharmacy

Sixth Semester Examination, June-2021 PHARMACOLOGY III [BP602T]

Time: 3:00 Hrs

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) The following antiasthma drug is not a bronchodilator:
 - (a) Ipratropium bromide
 - (b) Theophylline
 - (c) Formoterol
 - (d) Sodium cromoglycate
- 2) The most prominent and dose related side effect of salbutamol is:
 - (a) Rise in blood pressure
 - (b) Muscle tremor
 - (c) Hyperglycemia
 - (d) Central nervous system stimulation
- 3) The following classes of drugs are clinically beneficial in bronchial asthma:
 - (a) Histamine H1 receptor antagonists
 - (b) Platelet activating factor (PAF) antagonists
 - (c) Leukotriene (cys LT1) receptor antagonists
 - (d) All of the above
- 4) Select the fastest acting inhaled bronchodilator:
 - (a) Ipratropium bromide
 - (b) Formoterol
 - (c) Salbutamol
 - (d) Salmeterol
- 5) In a patient of bronchial asthma, inhaled salbutamol produces the following effect(s):
 - (a) Inhibits antigen-antibody reaction in the lungs
 - (b) Causes Broncho dilatation
 - (c) Reduces bronchial hyperactivity
 - (d) Both 'B' and 'C' are correct

Max Marks 75

[1×20 = 20 Marks]

- 6) Inhaled salbutamol is useful in bronchial asthma for:
 - (a) Aborting/terminating asthma attacks
 - (b) Round the clock prophylaxis of asthma
 - (c) Status asthmatics
 - (d) All of the above
- 7) Select the correct statement about salmeterol:
 - (a) It is a long acting selective beta2 agonist broncho-dilator
 - (b) It is a bronchodilator with anti-inflammatory property
 - (c) It is a beta blocker that can be safely given to asthmatics
 - (d) It is an antihistaminic with mast cell stabilizing property
- 8) Which of the following beta2 agonist bronchodilators is given by inhalation, and is suitable for both terminating asthma attacks as well as for twice daily prophylaxis:
 - (a) Terbutaline
 - (b) Bambuterol
 - (c) Salmeterol
 - (d) Formoterol
- 9) Caffeine is more powerful than theophylline in exerting the following action:
 - (a) Broncho dilation
 - (b) Cardiac stimulation
 - (c) Diuresis
 - (d) Augmentation of skeletal muscl contractility
- 10) The following vascular bed is constricted by caffeine:
 - (a) Coronary
 - (b) Cutaneous
 - (c) Cranial
 - (d) Mesenteric
- 11) Methylxanthines exert the following action(s) at cellular/molecular level:
 - (a) Intracellular release of Ca2+
 - (b) Antagonism of adenosine
 - (c) Inhibition of phosphodiesterase
 - (d) All of the above
- 12) Choose the correct statement about theophylline:
 - (a) Its use in asthma has declined because of narrow safety margin
 - (b) Its dose needs to be reduced in smokers
 - (c) It acts by increasing the formation of cAMP
 - (d) Its plasma half-life is longer in children compared to that in adults

- 13) Choose the correct statement about bambuterol:
 - (a) It is an orally acting bronchodilator
 - (b) It is a prodrug
 - (c) It inhibits the enzyme pseudo cholinesterase
 - (d) All of the above
- 14) Relatively higher dose of theophylline is required to attain therapeutic plasma concentration in:
 - (a) Smokers
 - (b) Congestive heart failure patients
 - (c) Those receiving erythromycin
 - (d) Those receiving cimetidine
- 15) Which of the following drugs inhibits theophylline metabolism and raises its plasma concentration:
 - (a) Phenytoin
 - (b) Ciprofloxacin
 - (c) Levofloxacin
 - (d) Rifampicin
- 16) Select the antiasthma drug which cannot be administered by inhalation:
 - (a) Theophylline
 - (b) Ipratropium bromide
 - (c) Budesonide
 - (d) Terbutaline
- 17) Theophylline is believed to benefit asthma patients by exerting the following actions except:
 - (a) Broncho dilatation
 - (b) Augmentation of diaphragmatic contractility
 - (c) Reduced mediator release
 - (d) Inhibition of antigen: antibody reaction
- Montelukast produces the following action(s) in bronchial asthma patients:
 - (a) Broncho dilatation
 - (b) Suppression of bronchial hyper reactivity
 - (c) Stabilization of mast cells
 - (d) Both 'A' and 'B'

- 19) In comparison to inhaled beta2 adrenergic agonists, the inhaled Anticholinergics:
 - (a) Are more effective in bronchial asthma
 - (b) Are better suited for control of an acute attack of asthma
 - (c) Produce slower response in bronchial asthma
 - (d) Produce little benefit in chronic obstructive lung disease

20) Leukotriene antagonists are used in bronchial asthma:

- (a) For terminating acute attacks
- (b) As monotherapy in place of beta2 agonists
- (c) As adjuvants to beta2 agonists for avoiding corticosteroids
- (d) As nebulized powder in refractory cases

Part-B

Q.2Long answer questions. $[10 \times 2 = 20 \text{ Marks}]$ Note : Attempt any two questions. Each question carries 10 marks.

- 1) Write the Brief classification , mechanism and ADR of Anti-fungal agents
- 2) Write the Brief classification, mechanism and ADR of Antiviral drugs
- 3) Write the Brief classification, mechanism and ADR of quinolones, fluoroquinolones, & aminoglycosides.

Part-C

Q.3 Short answer questions. [5×7 = 35 Marks] Note : Attempt any five questions. Each question carries 5 marks.

- 1) Write the Drugs used in the management of COPD.
- 2) Write the difference between Expectorants and antitussives with example.
- 3) Brief discussion about Nasal decongestants with example.
- 4) Brief discussion about Respiratory stimulants with example.
- 5) Brief classification and ADR of Antiulcer agents.
- 6) Short notes on Appetite stimulants and Appetite suppressants with example.
- 7) Short notes on Digestants and carminatives with example.
- 8) Write the difference between Emetics and anti-emetics.

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Enrollment No.....

Bachelor of Pharmacy Sixth Semester Examination, June-2021 Herbal Drug Technology [BP603T]

Time: 3:00 Hrs

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) The countries included under ICH are
 - (a) European Union
 - (b) Japan
 - (c) USA
 - (d) All

2) As per ICH guidelines the sub-section Q1A (R2) deals with

- (a) Photo stability testing
- (b) Stability testing of new dosages forms
- (c) Evaluation of stability data
- (d) Stability testing of new drugs & products

3) As per ICH guidelines the sub-section Q1B deals with

- (a) Photo stability testing
- (b) Stability testing of new dosages forms
- (c) Evaluation of stability data
- (d) Stability testing of new drugs & product

4) As per guidelines the sub-section Q2A deals with

- (a) Methodology
- (b) Definitions and terminology
- (c) Impurity testing of new drugs
- (d) Stability testing of new drugs & products
- 5) As per guidelines the sub-section Q2B deals with
 - (a) Methodology
 - (b) Definitions and terminology
 - (c) Impurity testing of new drugs
 - (d) Stability testing of new drugs & products

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[1×20 = 20 Marks]

Max Marks 75

- 6) Indicative substances as per guidelines is
 - (a) Secondary metabolite
 - (b) Primary metabolite
 - (c) Biomarker
 - (d) All
- 7) The following drugs are used as colorants except
 - (a) Capsicum
 - (b) Saffron
 - (c) Turmeric
 - (d) Neohesperdindihydrochalcone
- 8) The following drugs are used as natural sweeteners except
 - (a) Stevia
 - (b) Licorice
 - (c) Corcussativus
 - (d) Sucrose
- 9) The following drugs are used as natural binders except
 - (a) Gum Arabic
 - (b) Gelatine
 - (c) Linseed oil
 - (d) Corcussativus

10) The following drugs are used as diluents except

- (a) Sorbital
- (b) Arrowroot
- (c) Xylitol
- (d) Mannitol
- 11) The following drugs are used as viscosity builder except
 - (a) Agar
 - (b) Carrageenan
 - (c) Sorbital
 - (d) Pectin
- 12) Which of the following law passed by the Indian government in 1940?
 - (a) The poison Act
 - (b) Drug Enquiring committee
 - (c) The drug and cosmetic Act
 - (d) The narcotic drug Act

- 13) Which of the following law passed by the Indian government in 1930?
 - (a) The poison Act
 - (b) The dangerous drug Act
 - (c) The narcotic drug Act
 - (d) The drug and cosmetic Act
- 14) Eucalyptus oil is used most often to relieve which condition?
 - (a) Obesity
 - (b) Acne
 - (c) Coughing
 - (d) Bloating
- 15) Herbal medicine is based on the use of?
 - (a) Plant and Plant Extracts
 - (b) Water
 - (c) Animal sacrifice
 - (d) Human hair
- 16) Which form of herbal medicine is widely practiced in India?
 - (a) Western
 - (b) Greek
 - (c) Chinese
 - (d) Ayurvedic
- 17) Which plant's gel is often used in lotion and sunblock?
 - (a) Aloe Vera
 - (b) Ginger
 - (c) Acacia
 - (d) Turmeric
- 18) Which part of the ginger plant is used in health and medicine
 - (a) Underground stem
 - (b) Seed
 - (c) Flower
 - (d) Petal
- 19) Which part of the Senna plant is used in health and medicine
 - (a) Seed
 - (b) Flower
 - (c) leaves
 - (d) Roots

- 20) The volatile oils stored at _____.
 - (a) High temperature
 - (b) Humid place
 - (c) Dry place with expose to sun light
 - (d) Cool and dry place

Part-B

Q.2 Long answer questions. [2×10 = 20 Marks] Note : Attempt any two questions. Each question carries 10 marks.

- 1) Give details about spirulina and Amla as a nutraceuticals.
- 2) Describes monograph analysis of herbal drugs from recent pharmacopoeia.
- 3) Describes incorporation of prepared and standardized extract in lotion and shampoos.

Part-C

Q.3 Short answer questions. [5×7 = 35 Marks] Note : Attempt any seven questions. Each question carries 5 marks.

- 1) How to define Nutraceuticals .give various examples.
- 2) Give some advantages and disadvantages of ayurvedic and homeopathy system of medicine.
- 3) Give classification of Herbal food and Herbal drug interactions.
- 4) Define Herbal Excipients and give significans of substances of natural origin as excipients.
- 5) Short note on sweeteners, binders, flavours.
- 6) Define conventional herbal formulation and novel dosage forms.
- 7) Describe evaluation of herbal drugs according to WHO and ICH guidlines.
- 8) Define term Patent IPR, Bioprospecting and Biopiracy.

Bachelor of Pharmacy Sixth Semester Examination, June-2021 Biopharmaceutics and Pharmacokinetics [BP604T]

Time: 3:00 Hrs

Max Marks 75

[1x20 = 20 Marks]

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) Which is the major process of absorption for more than 90% of drugs?
 - (a) Facilitated dilution
 - (b) Active transport
 - (c) Endocytosis
 - (d) Passive diffusion
- 2) What is driving force for passive diffusion?
 - (a) Concentration gradient only
 - (b) Electrochemical gradient only
 - (c) Charge equilibration & Concentration gradient
 - (d) Concentration & electrochemical gradient both
- 3) What is the driving force for pore transport.
 - (a) Hydrostatic pressure
 - (b) Concentration gradient
 - (c) Electrochemical gradient
 - (d) Charge equilibration
- 4) Which type of molecules can't pass through pore transport
 - (a) Low molecular weight molecules
 - (b) Water soluble drugs
 - (c) Molecules upto 400 dalton's
 - (d) Molecules greater than 400 dalton's
- 5) What is mean by carrier
 - (a) Non polar drug can be transported through carrier mediated transport
 - (b) Carriers binds reversible & non covalently with solute molecule
 - (c) It discharges the molecules & destroys itself
 - (d) Carrier is protein

- 6) What is major difference between Facilitated & passive diffusion?
 - (a) Carrier mediated transport
 - (b) Downhill transport
 - (c) Energy is used
 - (d) Inhibition by metabolic poisons.
- 7) In active transport drug is transported from region of lower to one of higher concentration against
 - (a) Concentration gradient only
 - (b) Uphill transport only
 - (c) Concentration gradient & uphill transport both
 - (d) None of the above
- 8) Who has poorly developed BBB.
 - (a) Infants
 - (b) Adults of age more than 20
 - (c) Aged
 - (d) Children's of puberty
- 9) Which of the following has very low perfusion rate
 - (a) Fat and bone
 - (b) Muscle and skin
 - (c) Lungs and kidneys
 - (d) Liver and heart
- 10) Blood test is barrier is located at
 - (a) Capillary endothelium
 - (b) Sertolisertoli cell junction
 - (c) Fetal blood vessels
 - (d) None of the above
- 11) Binding of drugs falls into 2 components these are
 - (a) Binding of drug to bile components & to extra vascular tissue
 - (b) Binding of drugs to bile components & other cells
 - (c) Binding of drugs to cell & blood cells
 - (d) Binding of drugs to blood components to bones to cells
- 12) What is molecular weight of human serum
 - (a) 50000 dalton's
 - (b) 65000 dalton's

- (c) 60000 dalton's
- (d) 75000 dalton's
- 13) Which of following is correct order
 - (a) Albumin \rangle alpha 1 acid glycoprotein \rangle globulin \rangle lipoproteins
 - (b) Albumin $\$ globulin $\$ lipoproteins $\$ alpha 1 glycoprotein
 - (c) Albumin \rangle alpha 1 glycoprotein \rangle lipoproteins \rangle globulin
 - (d) Albumin \rangle lipoproteins \rangle globulin \rangle alpha 1 glycoprotein
- 14) What is the name of drug binding site III of HSA
 - (a) Tamoxifen binding site
 - (b) Digitoxin binding site
 - (c) Diazepam binding site
 - (d) Warfarin and azopropazone binding site
- 15) Which of the given drug bind to B2 Globulin
 - (a) Steroidal drug
 - (b) Vitamin A D E K
 - (c) Ferrous ions
 - (d) Carotenoids
- 16) Which vitamin molecules will bind to alpha 2 Globulin
 - (a) Vitamin A D E K
 - (b) Vitamin B complex
 - (c) Vitamin A & B
 - (d) All of the above
- 17) Which of the given drug bind alpha 1 Globulin
 - (a) Steroidal drug
 - (b) Vitamin ADEK
 - (c) Ferrous ions
 - (d) Carotenoids
- 18) Which drug bind to RBC membrane
 - (a) Imipramine
 - (b) Phenytoin
 - (c) Acetazolamide
 - (d) Phenothiazine's
- 19) Which is the primary site for metabolism
 - (a) Liver
 - (b) Kidneys

- (c) Lungs
- (d) Intestines
- 20) Following are the phase 1 reactions except
 - (a) Oxidative reactions
 - (b) Hydrolytic reactions
 - (c) Reductive reactions
 - (d) Sulfide reaction

Part-B

Q.2 Long answer questions. [10x2 = 20 Marks] Note : Attempt any two questions. Each question carries 10 marks.

- 1) Give the full introduction of biopharmaceutics.
- 2) What is pharmacokinetics explain with compartmental models.
- 3) Explain bioavailability and bioequivalence studies.

Part-C

Q.3 Short answer questions. [5×7 = 35 Marks] Note : Attempt any seven questions. Each question carries 5 marks.

- 1) Give a short note on elimination.
- 2) Give a short note on Distribution.
- 3) Give a short note on multi compartment model.
- 4) Give a short note on nonlinear pharmacokinetics.
- 5) Give a short note on Absorption.
- 6) Give a short note on one compartment open model
- 7) Give a short note on absolute and relative bioavailability
- 8) Give a short note on methods to enhance the dissolution rate and bioavailability of poorly soluble drugs.

Bachelor of Pharmacy Sixth Semester Examination, June-2021 Pharmaceutical Biotechnology [BP605T]

Time: 3:00 Hrs

Max Marks 75

[1x20 = 20 Marks]

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. The First crop plant genome sequenced a) Maize b) Wheat c) Rice d) Barley
- 2. Enzymes are
 - a) Protein
 - b) Carbohydrate
 - c) Nucleic acids
 - d) DNA molecule

3. The first Trangenic plant to be produced:

- a) Rice
- b) Maize
- c) Cotton
- d) Tobacco
- 4. PCR is a DNA amplifying in vivo method.
 - a) True
 - b) False
- 5. Primer used for the process of polymerase chain reaction are_____
 - a) Single stranded DNA oligonucleotide
 - b) Double stranded DNA oligonucleotide
 - c) Single stranded RNA oligonucleotide
 - d) Double stranded RNA oligonucleotide
- 6. At what temperature do denaturation of DNA double helix takes place?
 - a) 60°
 - b) 54°
 - c) 74°

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d) 94°

- 7. Which of the following are the characteristics of microinjection?
 - a) Suspend the cells in an electroporation cuvette
 - b) Injecting the DNA into the cell
 - c) Also known as Biolistics
 - d) Usage of ultrasound
- 8. Which of the following are the characteristics of laser-induced transfection?
 - a) Fin focus of laser light is used
 - b) Injecting the DNA into the cell
 - c) Also known as biolistic
 - d) Usage of ultrasound

9. Damage and errors in DNA cause_____

- a) Mutation
- b) DNA repair
- c) Translation
- d) Transcription

10. Bacterial gene delivery is known as _____

- a) Transduction b) Bactofection
- c) Infection d) Conjugation
- 11. Restriction enzymes were discovered by
 - (a) Smith and Nathans
 - (b) Alexander Fleming
 - (c) Berg
 - (d) None

12. Bacteria protect themselves from viruses by fragmenting viral DNA with

- (a) Ligase
- (b) Endonuclease
- (c) Exonuclease
- (d) Gyrase
- 13. All types of mutations are transferable among generations.
 - (a) True
 - (b) False
- 14. Which of the following is NOT a type of reverse mutation?
 - (a) Back mutation
 - (b) Intergenic suppressor mutation

- (c) Intragenic suppressor mutation
- (d) Missense mutation
- 15. How many kinds of mutation are found in DNA which includes mutation of only one base?
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4

16. The Golden Rice variety is rich in

- (a) Vitamin C
- (b) B-carotene and ferritin
- (c) Biotin
- (d) Lysine

17. The DNA fragments have sticky ends due to

- (a) Endonuclease
- (b) Unpaired bases
- (c) Calcium ions
- (d) Free methylation

18. Plasmids are used as cloning vectors for which of the following reasons?

- (a) It can be multiplied in culture
- (b) Self-replication in bacterial cells
- (c) It can be multiplied in laboratories with the help of enzymes
- (d) Replicate freely outside bacterial cells

19. The First protein sequenced by Frederick sanger is

- (a) Haemoglobin
- (b) Myoglobin
- (c) Insulin
- (d) Myosin

20. The vaccines prepared through recombinant DNA technology are

- (a) Third generation vaccines
- (b) First-generation vaccines
- (c) Second-generation vaccines
- (d) None

Part-B

Q.2 Long answer questions. [10x2 = 20 Marks] Note : Attempt any two questions. Each question carries 10 marks.

- 1) Define biotechnology Write application of biotechnology to pharmaceutical industry.
- 2) Discuss in immune blotting technique.
- 3) What is Recombinant DNA Technology? Describe in detail how gene cloning can be performed using various enzymes and clone vector.

Part-C

Q.3 Short answer questions. [7x5 = 35 Marks] Note : Attempt seven questions. Each question carries 5 marks.

- 1) What are the ideal requirements of plasma substitutes.
- 2) Give an application of Hybridoma Technology.
- 3) Briefly describe the process of Fermentation.
- 4) Explain the functioning of Gene
- 5) State the general principles in Gene Synthesis.
- 6) What is Enzyme immobilization? Give advantages and disadvantage of EI and its application.
- 7) Write scope and Application of biotechnology.
- 8) Describe classification of Protein Engineering. Explain.

Bachelor of Pharmacy

Sixth Semester Examination, June-2021

Quality Assurance [BP606T]

Time: 3:00 Hrs

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. According to dictionary Quality is a degree of
 - (a) Excellence
 - (b) Agreement
 - (c) Greatness
 - (d) None of these
 - 2. GMP Ensures which of the following parameter .
 - (a) Quality
 - (b) Safety
 - (c) Efficacy
 - (d) All

3. Total Quality Management is a description of the _____.

- (a) Culture
- (b) Attitude
- (c) Organization
- (d) All
- 4. The purpose of ICH is to make recommendation on ways to achieve greater_____.
 - (a) Quality
 - (b) Harmonization
 - (c) Safety
 - (d) Optimization
- 5. Which of the following tools are used in QbD Process.
 - (a) PAT
 - (b) DOE
 - (c) Risk Assessment
 - (d) All

Max Marks 75

[1×20 = 20 Marks]

- 6. In which year ISO was Established.
 - (a) 1926
 - (b) 1936
 - (c) 1946
 - (d) 1956

7. Government of _____ has authorized NABL as the sole Accredation body for Testing and Calibration laboratories.

- (a) Australia
- (b) US
- (c) Japan
- (d) India
- 8. In Pharmaceutical Industry an employee should have ______ of the job description.
 - (a) Clarity
 - (b) Understanding
 - (c) Both A & B
 - (d) None of these
- 9. In Which year Factories came into Existence.
 - (a) 1958
 - (b) 1948
 - (c) 1968
 - (d) 1978
- 10. Availability of ______ from supplier with equipment is important for Operating, handling, validation and Qualification.
 - (a) SOP
 - (b) Design
 - (c) Manual
 - (d) All
- 11. Secondary Packaging materials are used to improve the ______ of the product.
 - (a) Therapeutic Effectiveness
 - (b) Appearance
 - (c) Quality
 - (d) Strength

12.	In leakage test of for plastic container no. of containers are filled with water. (a) 10 (b) 15 (c) 20 (d) 25	e
13.	The term GLP is most commonly associated with the Industry. (a) Pharmaceutical (b) Petrochemical (c) Polymer (d) None of these	_
14.	Complaint about product is an indicator of the Product (a) Quality (b) Efficacy (c) Safety (d) None of these	
15.	 Batch manufacturing record is a specific documents . (a) Product (b) Batch (c) Both A & B (d) None 	
16.	Calibration minimizes uncertainties by assuring the of the test Equipment. (a) Accuracy (b) Robustness (c) LOQ (d) LOD	e
17.	The purpose of IQ is to check the (a) Design (b) Installation (c) Performance (d) None of these	

18. Organizing is the function of management which follows_____

- (a) Directing
- (b) Controlling
- (c) Planning
- (d) None of these

19. Warehousing refers to the process of _____ goods.

- (a) Holding
- (b) Conservation
- (c) Both A & B
- (d) None of these

20. Light Sensitive material should be stored in _____ container.

- (a) Transparent
- (b) Amber Colour
- (c) Plastic
- (d) None of these

Part-B

Q.2 Long answer questions. [2×10 = 20 Marks] Note : Attempt any two questions. Each question carries 10 marks.

- 1) Explain Validation and give its scope, importance and types.
- 2) What do you mean by material management, its need and purpose? Explain principles of material management.
- 3) Write in Detail on Batch formula record and Master formula record.

Part-C

Q.2 Short answer questions. [7×5 = 35 Marks] Note: Attempt any 5 questions. Each question carries 7 marks.

- 1) Concept of GMP
- 2) Total Quality Management
- 3) Steps of ICH Process
- 4) Quality by Sensing (QbD)
- 5) International Organization For Standardization (ISO)
- 6) NABL Accreditation process.
- 7) Environmental Control in Sterile Area.
- 8) Quality Control test for Secondary packaging material.