Enrollment No……

Bachelor of Pharmacy
Seventh Semester Main Examination, Dec-2020
Instrumental Methods of Analysis [BP701T]

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]

(i) Beer Lambert's law gives the relation between which of the following?
a) Reflected radiation and concentration
b) Scattered radiation and concentration
c) Energy absorption and concentration radiation
d) Energy absorption and reflected radiation

(ii) HPLC methods include-
a) Liquid/liquid (Partition) chromatography
b) Liquid/solid (Adsorption) chromatography
c) ION exchange and size exclusion chroma
d) All of the above

(iii) Which of the following columns are not used in liquid or high performance liquid chromatography?
a) Analytical column b) Separation column
c) Guard column d) Capillary column

(iv) In which of the following ways, absorption is related to transmittance?
a) Absorption is the logarithm of transmittance
b) Absorption is the reciprocal of transmittance
c) Absorption is the negative logarithm of transmittance
d) Absorption is a multiple of transmittance

(v) In Flame emission photometers, the measurement of _____ is used for quantitative analysis.
a) Colour b) Intensity
c) Velocity d) Frequency

(vi) Which of the following is the function of the chopper in Atomic Absorption Spectroscopy?
a) To split the beam into two
b) To break the steady light into a pulsating light
c) To filter unwanted components
d) To reduce the sample into atomic state

(vii) Which of the following is not a component of the emission system in Flame photometer?
a) Burner b) Atomiser
c) Fuel gases and their regulation d) Chopper

(viii) Which of the following is not a fuel used in flame photometry?
a) Acetylene b) Propane
c) Hydrogen d) Camphor oil

(ix) Beer's law states that the intensity of light decreases with respect to _____
a) Concentration b) Distance
c) Composition d) Volume

(x) Laminar flow burner used in Flame photometers is also known as _____
a) Turbulent burner b) Premix burner
c) Total consumption burner d) Nozzle mix burner

(xi) Chromatography is a physical method that is used to separate and analyse _____
a) Simple mixtures b) Complex mixtures
c) Viscous mixtures d) Metals

(xii) In which type of chromatography, the stationary phase held in a narrow tube and the mobile phase is forced through it under pressure?
a) Column chromatography b) Planar chromatography
c) Liquid chromatography d) Gas chromatography

(xiii) Which of the following is not true about Absorption spectroscopy?
a) It involves transmission
b) Scattering is kept minimum
c) Reflection is kept maximum
d) Intensity of radiation leaving the substance is an indication of concentration

(xiv) In chromatography, the stationary phase can be _____ supported on a solid.
a) Solid or liquid b) Liquid or gas
c) Solid only d) Liquid only

(xv) Which of the following is not a detector used in Flame emission photometers?
a) Photronic cell b) Photovoltaic cell
c) Photoemissive tube d) Chromatogram

(xvi) Which of the following is used in calibration of IR instrument?
a) TMS b) Glass
c) Metal halide d) Poly styrene

(xvii) Which compound are used as diluent in IR sampling?
a) Alkali halide b) Keton
c) Aldehyde d) Acetone

(xviii) In Atomic Absorption Spectroscopy, which of the following is the generally used radiation source?

a) Tungsten lamp b) Xenon mercury arc lamp
c) Hydrogen or deuterium discharge lamp d) Hollow cathode lamp

(xix) In Column chromatography, the stationary phase is made of _____ and the mobile phase is made of _____
a) Solid, liquid b) Liquid, liquid
c) Liquid, gas d) Solid, gas

(xx) In Thin layer chromatography, the stationary phase is made of _____ and the mobile phase is made of _____

a) Solid, liquid
b) Liquid, liquid
c) Liquid, gas
d) Solid, gas

Part-B

Long answer questions. [10x2 = 20 Marks]

Note : Attempt any two questions. Each question carries 10 marks.

Q.1 Explain the principle and instrumentation of UV Visible spectroscopy.

Q.2 What are the different chromatography techniques explain thin layer chromatography.

Q.3 Explain High performance liquid chromatography (HPLC).

Part-C

Short answer questions. [5x7 = 35 Marks]

Note : Attempt any seven questions. Each question carries 5 marks.

Q.1 Explain factors affecting fluorescence in fluorimetry with application.

Q.2 Explain the principle of Atomic absorption spectroscopy.

Q.3 Explain factors affecting electrophoretic mobility in electrophoresis technique.

Q.4 Explain the principle of IR spectroscopy with its applications.

Q.5 Explain gel chromatography and give its applications.

Q.6 Explain column chromatography give its advantages and disadvantages.

Q.7 Explain the principle of flame photometry.

Q.8 Explain affinity chromatography with its applications.

Enrollment No……

Bachelor of Pharmacy
Seventh Semester Main Examination, Dec-2020
Industrial Pharmacy-II [BP702T]

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]

(i) Which of the following is used for validation of hot air oven?
(a) Voltmeter (b) Pressure gauge
(b) Flowmeter (d) Stopwatch

(ii) Which of the following is an important aspect of Equipment validation?
(a) Instructional Qualification (b) Process Qualification
(c) Performance Qualification (d) Process Validation

(iii) Accuracy of an analytical method is expresses in terms of?
(a) % relative error (b) Mean
(c) % relative standard deviation (d) Median

(iv) The type of process validation which is based on information generated during actual implementation of the process is known as _____
(a) Prospective validation
(b) Retrospective validation
(c) Concurrent validation
(d) Analytical validation

(v) The guidelines that describe the Analytical Method Validation – Text & Methodologyare?
(a) ICH Q2 (b) ICH Q1
(b) ICH Q8 (d) ICH Q9

(vi) The variable that is tested during validation of a powder blender is:
(a) Type of material (b) RPM
(c) Particle size of powder (d) Type of equipment

(vii) URS stands for?
(a) User Requirement Specification
(b) User Resource Specification
(c) User Retrospective Specification
(d) User Reference Specification

(viii) The variable for FBD control parameters includes:
(a) Air volume (b) Bowl change
(c) Bowl sieve (d) Porosity of filter bags

(ix) The amount of sample sampled for validation of a Tray Dryer is _____ g
(a) 4 (b) 1
(c) 3 (d) 2

(x) Pouching process is one of the unit operations of?
(a) Oral drug delivery
(b) Nasal drug delivery
(c) Transdermal drug delivery

(d) Ocular drug delivery

(xi) Which of the following in-process tests must be performed during compression stage of tablet manufacturing?

(a) Drug solubility
(b) Dissolution
(c) Hardness
(d) Drug-excipient compatibility

(xii) APQR stands for?

(a) Annual Product Quality Reference
(b) Annual Process Quality review
(c) Annual Product Quality Review
(d) Annual Process Quality Reference

(xiii) MOC stands for?

(a) Material of Construction
(b) Material of Compression
(c) Material of Control
(d) Material of Cost

(xiv) Distance between two dies of a compression machine is checked with the help of?

(a) Optical micrometer
(b) Screw gauge
(c) Vernier caliper
(d) Monsanto tester

(xv) Performance Qualification checklist for compression machine includes:

(a) Punch shape
(b) Disintegration time
(c) Drug solubility
(d) Air velocity

(xvi) The lowest available capsule size is:

(a) 0
(b) 000
(c) 5
(d) 1

(xvii) Equipment Validation must be always done by?

(a) User
(b) Vendor
(c) Manufacturer
(d) Dealer

(xviii) Ribbon Thickness is one of the variables for validation of _____ filling machine

(a) Soft gelatin capsule
(b) Hard gelatin capsule
(c) Pellet
(d) Tablet

(xix) cGMP stands for?

(a) Compendium Good Monitoring Practices
(b) Compendium Good Manufacturing Practices
(c) Current Good Manufacturing Practices
(d) Current Good Monitoring Practices

(xx) Regulatory basis of process validation is available in:

(a) FDA (b) USP
(c) IP (d) BP

Part-B

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

Q.1 What is pilot plant scale up? Discuss the significance and requirements for scale up of pharmaceutical product from R and D to plant.

Q.2 What do you mean by the term "Technology Transfer"? Discuss in detail about WHO guidelines for technology transfer.

Q.3 Define the term "Regulatory Affairs". Discuss about role of regulatory affairs department and responsibility of regulatory affairs professionals.

Part-C

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

Q.1 Discuss the concept of quality, total quality management and Quality by Design (QbD).

Q.2 Give a detailed account on regulatory requirements and approval procedures for new drug.

Q.3 Discuss general considerations of Investigational New Drug (IND) Application.

Q.4 Explain the role of biostatistics in pharmaceutical product development.

Q.5 Discuss in detail about ISO 9000 and ISO 14000 series of quality systems standards.

Q.6 Explain Technology transfer agencies in India

Q.7 Write a note on SUPAC guidelines

Q.8 Discuss Six Sigma concept and Management of clinical studies

Enrollment No……

Bachelor of Pharmacy
Seventh Semester Main Examination, Dec-2020
Pharmacy Practice [BP703T]

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]

(i) Which one of the following is not an essential service defined in the community Pharmacy Cotractual Framework.
(a) Signposting to other healthcare professionals

(b) Diposal of used waste medicines
(c) Dispensing private prescriptions
(d) Support for selfcare

(ii) Full Form of NDDR is……
(a) New drug discovery research
(b) New drug discovery rotation
(c) New design discovery research
(d) None of these

(iii) Priscription is a…….
(a) an order written by a registered medical practitioner
(b) an order written by pharmacist
(c) Written by anyone
(d) none of these

(iv) Wholeseller is link between
(a) Manufacturer & Customer (b)Manufacturer & Retailer
(c) None of these (d) Retailer &wholeseller

(v) Dispensing direction to patient in a prescription is called…….
(a) Subscription (b) Superscription
(c) Inscription (d) Signa

(vi) The Latin term *Nocte* means……..
(a) When necessary (b) At bed
(c) At night (d) Occasionally

(vii) Immunization can prevent…….
(a) Communicable Diseases (b) Non- Communicable Diseases
(c) Any diseases (d) All of the Above

(viii) Community pharmacy is ……
(a) Retail pharmacy business
(b) Practice of pharmacy in hospitals
(c) Medical practice in village
(d) Prescribing medicines by pharmacist's

(ix) The Latin term *Pulvis* means
(a) A tablet (b) A paint
(c) A powder (d) A capsule

(x) The Latin term :*Si Opus Sit*" means…….
(a) Night & morning (b) At bed time
(c) As prescribed (d) When necessary

(xi) Prescription Part containing direction to pharmacist…….
(a) Inscription (b) Subscription
(c) Superscription (d) Signature

(xii) Which of the following reaction is called Augmented adverse drug reactions?

(a) Genetically determined effects. (b) Idiosyncracy

(c) Rebound effect on discontinuation (d) Allergic reactions & anaphylaxis

(xiii) Severity of epidemic does not depend upon……

(a) Economic Condition (b) Host population

(c) Geographic condition (d) Social cultural behaviour

(xiv) Which of the following is the part of Hospital Formulary?

(a) Information on Hospital policy (b) Drug products listing

(c) Special Information (d) All of the Above

(xv) Which one of these is a genetically determined adverse drug reactions?

(a) Addication. (b) Teratogenecity

(c) Carcinogenicity (d) Idiosyncracy

(xvi) The drug list consists of a list of therapeutic agents by their generic names followed by information on:
(a) Pharmacokinetic (b) Direction for use
(c) Strength & dosage form (d) Toxicology

(xvii) Which one of the following is not true when considering responsible Pharmacist Legislation?
(a) The must display notice Stating name and GphC registration no. (b)
The RP must keep record of the hours they acted as RP
(c) The RP must ensure that Pharmacy Standard Operating are reviewed that at least every 5year
(d) None of these

(xviii) _____ is the organization to manage the procurement, storage, preservation, packaging, sterilization, compounding, preparation, dispensing or distribution of medicine.
(a) Clinical Pharmacy (b) Hospital Pharmacy
(c) Community Pharmacy (d) Ambulatory Pharmacy

(xix) The most specific & sensitive method for assessment of compliance can be used to detect potent therapeutic agent in body fluids is
(a) Drug analysis (b) Interrogation
(c) Urine marker (d) Residual Tablet counting

(xx) Which of the following drug does not require therapeutic drug monitoring?
(a) Digitoxin (b) Gentamycin
(c) Phenytoin (d)Paracetamol

Part-B

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

Q.1 Describe the term prescription. Describe in brief the various part of prescription.

Q.2 What are Ointments? How are they Classified? Describe in brief the various type of ointments.
Q.3 Define incompatibility. What are different types of incompatibilities? Describe in brief about physical incompatibility.

Part-C

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

Q.1 Write Sources of Error in prescription.

Q.2 Describe Posology.

Q.3 Differentiate between Syrup and Elixir.

Q.4 Write Role of pharmacist in community health care and Education.

Q.5 Classify bandages and their standard.

Q.6 Write in brief Therapeutic Incompatibility.

Q.7 Differentiate between Liniment and Lotion.

Q.8 Define term Antagonism and Synergism.

Enrollment No……

Bachelor of Pharmacy

Seventh Semester Main Examination, Dec-2020

Novel Drug Delivery System [BP704T]

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]

(i) Which of the following drugs cannot be given as transdermal administration-
(a) Drugs with very short half-life
(b) Drugs with narrow therapeutic indices
(c) Easy removal and termination
(d) Drugs against peptic ulcer

(ii) Which of the following characteristics is suitable for transdermal drug-
(a) Large drug dose
(b) Large molecular size
(c) Drugs with narrow therapeutic indices
(d) Drugs which are metabolized in the skin

(iii) What are the characteristics of the monolithic devices-
(a) The drug has a large therapeutic index
(b) Aqueous solutions
(c) Control drug release by partitioning the drug from the oil
(d) Administration of emulsions

(iv) The rate at which monolithic devices transfer drugs to the patient body is proportional to _____ of time.
(a) Square of time
(b) The square root of time
(c) Twice the time
(d) Half the time

(v) What are the characteristics of the reservoir or membrane devices-
(a) The drug has a large therapeutic index
(b) Drug permeation rate is high
(c) Control drug release by partitioning the drug from the oil
(d) Administration of emulsions

(vi) What are the characteristics of the mixed monolithic-reservoir devices-
(a) The drug has a large therapeutic index

(b) Drug permeation rate is high
(c) The drug-polymer matrix is layered by rate-controlling membrane
(d) Administration of emulsions

(vii) The absorption of the ophthalmic drug does not depend on which of the following?
a) Physicochemical properties of the permeating molecule
b) Drainage of tears
c) Output of tears
d) Size of the eyeball

(viii) Which of the following is false in regarding reservoir devices?
a) These devices are used when the drug permeation rate is rapid
b) The release of the drug is controlled
c) Suitable for low therapeutic indices
d) The drug is contained in a powder form floating on liquid

(ix) Which of the following is true for monolithic devices?
a) These devices are used when the drug permeation rate is rapid
b) The release of the drug is controlled
c) Suitable for drugs with large therapeutic indices
d) The drug is contained in a powder form floating on liquid

(x) Which of the following is false for monolithic devices?
a) The drug used for these devices has large therapeutic indices
b) There are three categories of matrix devices
c) 1st type has the drug dissolved in the polymer matrix
d) 2nd type has drug dispersed

(xi) The four types of Artificial nanomaterials are _____
a) Carbon-based, non-metallic, composites and ceramics
b) Carbon-based, metallic, composites and ceramics
c) Carbon-based, non-metallic, composites and dendrimers
d) Carbon-based, metallic, composites and dendrimers

(xii) Nano sized polymers built from branched units are called _____
a) Dendrimers b) Composites
c) Carbon-based materials d) Metal-based materials

(xiii) Which property of nanoparticles provides a driving force for diffusion?
a) Optical Properties b) High surface area to volume ratio
c) Sintering d) There is no such property \

(xiv) Which property of Nanomaterials make them suitable to be used for elimination of pollutants?
a) High purity b) Better thermal conductivity
c) Enhanced chemical activity d) Small size

(xv) Nanoscale aluminium oxide increases the _____
a) Conductivity b) Resistance
c) Ductility d) Stability

(xvi) Which of the following should not be a property of implants?
a) Environmental stable b) Biostable
c) Non-toxic d) Nonremovable

(xvii) Which is the disadvantage for implants?
a) More effective b) More prolonged action
c) Significantly small dose d) Need of microsurgery

(xviii) Subcutaneous tissue is an ideal location for implants?
a) True b) False

(xv) Which of the following drugs are used in implants?
a) Pantoprazole b) Mannitol
c) Amlodipine d) Morphine antagonist

(xx) Which of the following is a false statement for vapour pressure pump?
a) The device consists of two chambers
b) A chamber contains the drug solution
c) Drug solution chamber is separated by rigid walls
d) Vapour chamber contains vaporizable fluids

Part-B

Long answer questions. [10x2 = 20 Marks]

Note : Attempt any two questions. Each question carries 10 marks.

Q.1 Give introduction, advantages and disadvantages of implants and osmotic pumps.

Q. 2 Describe the formulation of inhalers.

Q.3 Give the basic concepts of Transdermal drug delivery systems.

Part-B

Short answer questions. [5x7 = 35 Marks]

Note : Attempt any seven questions. Each question carries 5 marks.

Q.1 Give the principles of bio adhesion and formulation considerations of buccal delivery systems.

Q.2 Write a note on Nasopulmonary drug delivery system.

Q.3 Detail the intra ocular barriers and methods to overcome them.

Q.4 Explain the formulation of transdermal patches of drug delivery system.

Q.5 What are nanoparticles? Write its methods of liposomes. Discuss application.

Q.6 Difference between Liposomes and Niosomes.

Q.7 Detail about Intra uterine devices

Q.8 Write short notes on any three:
a) Ocuserts
b) Monoclonal Antibodies

c) Nebulizers
d) Nanoparticles.