

Diploma in Pharmacy
First Year Main Examination, April-2021
Pharmaceutics-I (DPY101)

Time: 3:00 Hrs**Max Marks 80****Note : Attempt any five questions. Each question carries equal marks.****Q.1 (A) Fill in the blanks with suitable words. (Any eight)**

- (i) The Suspension should _____ before use.
- (ii) One milligram = _____ gram.
- (iii) The term Pharmacopoeia derived from the greek word _____.
- (iv) The full form of IP is _____.
- (v) The full form of BP is _____.
- (vi) Tablet is a _____ Dosage form.
- (vii) Emulsion is a _____ Dosage form.
- (viii) Light Resistant containers protect the content from _____.
- (ix) Syrups are concentrated solution of _____.
- (x) Diluents are used in tablet to make _____.

(B) Attempt multiple choice questions. (Any eight)

- (i) The first edition of I.P. was published in-
a) 1968 b) 1986 c) 1948 d) 1868
- (ii) Tablet Punching machine works on the principle of-
a) Attraction b) Compression and attrition
c) Compression d) Dissolution
- (iii) HPMC (Hydroxy Propyl Methyl Cellulose) is-
a) A Polymer b) A Diluent
c) A Glident d) A Blinder
- (iv) Hardness of the tablet is measured by
a) Friability apparatus b) Disintegration apparatus
c) Vernier Calliperse d) Monsanto Hardness tester
- (v) Starch is used as _____ in Tablet.
a) Flavouring agent b) Coating material
c) Colouring agent d) Binder

(vi) Particle size reduction increases the _____ of solid substances.

- a) Evaporation
- b) Precipitation
- c) Surface area
- d) Sublimation

(vii) Ophthalmic dosage forms are-

- a) Tablet
- b) Eye drops
- c) Capsules
- d) Syrups

(viii) Parenteral dosage forms are-

- a) Tablet
- b) Injection
- c) Ointment
- d) Capsule

(ix) Capsule is a _____

- a) Solid Dosage form
- b) Liquid Dosage form
- c) Parenteral
- d) Semisolid Dosage form

(x) Hammer mill works on the principle of-

- a) Compression
- b) Dissolution
- c) Disintegration
- d) Impact

Q.2 (A) What is Sterilization. Classify it.

(B) Describe different method of Sterilization.

Q.3 (A) Define Tablet and describe the different types of tablets.

(B) Explain the different types of coating on Solid Dosage form.

Q.4 (A) Define Dosage form & give the classification of Dosage forms with example.

(B) Explain the various Drug delivery systems.

Q.5 (A) Describe the different types of containers and closures used in pharmaceutical industry.

(B) Classify the different closures.

Q.6 (A) Write a short note on Liquid Dosage forms.

(B) Write short note on Solid Dosage forms.

Q.7 (A) What is Extraction? Describe percolation & maceration processes.

(B) Describe Ayurvedic Dosage forms.

Q.8 (A) Define Powders. Write down the official standards for powders according to I.P.

(B) Write a short note on Soft gelatin capsules.

Diploma in Pharmacy
First Year Main Examination, April-2021
Pharmaceutical Chemistry-I [DPY102]

Time: 3:00 Hrs

Max Marks 80

Note: Attempt any five questions.

All questions carry equal marks.

Q.1 (a) Fill in the blanks with suitable words. (Any eight)

- (i) PAS is a _____ .
- (ii) Trimethoprim has _____ Taste .
- (iii) Chloroxylenol is marketed under brand name of _____ .
- (iv) Cholorxylenol is a derivative of _____ .
- (v) Morphine and heroin differ from each other in respect of _____ .
- (vi) Sodium hydroxide is commonly Known as _____ .
- (vii) Strong ammonium hydroxide is prepared by _____ .
- (viii) If the PH of the blood falls below 7.3, the condition is termed as _____ .

(b) Attempt multiple choice questions. (Any eight)

- (i) By using Isoniazid peripheral neuropathy is occur due to deficiency of –
 - (a) Vitamin B1
 - (b) Vitamin B6
 - (c) Vitamin C
 - (d) Vitamin D
- (ii) ORS stands for
 - (a) Oral rehydration sucrose
 - (b) Oral rehydration salt
 - (c) Both
 - (d) None
- (iii) Side effect of Rifamycin is -----
 - (a) Flue like symptoms
 - (b) Hepatitis
 - (c) Peripheral neuropathy
 - (d) Both a & b

- (iv) Homemade ORS constitutes of
 (a) Two tea spoon full of salt, eight tea spoon full of sugar in 1 litre of water
 (b) One teaspoonful of salt, eight teaspoonful of sugar in 1 liter of water
 (c) Both
 (d) None
- (v) Clinical manifestation associated with potassium is
 (a) Hypertension (b) Acidosis
 (c) Renal damage (d) Both (a) and (b)
- (vi) Compounds capable of function as antimicrobial agent through oxidative mechanism are
 (a) H_2O_2 (b) Halogen
 (c) $KMnO_4$ (d) All of these
- (vii) Hard bases have
 (a) High electropositive (b) Low electronegative
 (c) Both the above (d) None of the above
- (viii) Example of strong acid is
 (a) Ca^{2+} (b) Hg^+ (c) I^+ (d) Cu^+
- (ix) Pharmaceutical buffer system could be categorizes into
 (a) 1 (b) 2 (c) 3 (d) None of these
- (x) Topical agent depending upon their action or used divided into
 (a) Protective (b) Antimicrobial
 (a) Astringent (d) All of these
- Q.2 (a) Explain antimicrobial agents?
 (b) Explain gastrointestinal agent?
- Q.3 (a) Write Electrolytes used for replacement therapy- Sodium chloride and its preparations?
 (b) Write about Potassium chloride and its preparations?

Q.4 (a) Write about Dental Products & its official compound- Sodium

fluoride, Stannous fluoride

(b) Write short note on- i) Zinc oxide, & ii) Calamine

Q.5 (a) Write about Antacids- Sodium bicarbonate,

(b) Short note on- i) Potassium permanganate & ii) Zinc Sulphate

Q.6 (a) Explain radio pharmaceuticals?

(b) Give identification test of anion and cation as per IP ?

Q.7 (a) Explain pharmaceutical importance of quality control ?

(b) Give the methods of quality control & source of impurities?

Q.8 (a) What is antidotes-sodium nitrate?

(b) Limit tests for Arsenic and Heavy metals.

Q.9 (a) Define Expectorants and Emetics-Ammonium chloride*, Potassium iodide, Antimony potassium tartrate.

(b) Explain Major Intra and Extra cellular electrolytes

Q.10 (a) Explain Radio pharmaceuticals and contrast media- Radio activity-Alpha; Beta and Gamma Radiations, Biological effects of radiations, Measurement of radio activity

(b) Write methods used for quality control, sources of impurities in pharmaceuticals.

Diploma in Pharmacy
First Year Main Examination, April-2021
PHARMACOGNOSY [DPY103]

Time: 3:00 Hrs

Max Marks 80

Note : Attempt any five questions. All questions carry equal marks.

- Q.1 Attempt multiple choice questions. 1x16=16
- (i) Drug not belonging to volatile oil class:
- (a) Peppermint
 - (b) Clove
 - (c) Castor oil
 - (d) Garlic
- (ii) Select that does not belong to the tannin class:
- (a) Colophony
 - (b) Guar gum
 - (c) Acacia
 - (d) Agar
- (iii) Select the drug, which is not showing carminative property?
- (a) Dil
 - (b) Mentha
 - (c) Senna
 - (d) Cardamom
- (iv) _____ is not used as expectorant.
- (a) Ipecacuanha
 - (b) Vasaka
 - (c) Liquorice
 - (d) Atropine
- (v) _____ is not used as cardio tonics.
- (a) Digitalis
 - (b) Cinchona
 - (c) Squill
 - (d) Stropanthus

- (vi) Drugs is used as Antihypertensive:
- (a) Rauwolfia
 - (b) Digitalis
 - (c) Squill
 - (d) Stropanthus
- (vii) _____ is used as adrenergic drug.
- (a) Ephedra
 - (b) Physostigma
 - (c) Pilocarpus
 - (d) Belladonna
- (viii) Drug do not used as anticancer:
- (a) Podophyllum
 - (b) Curare
 - (c) Camptotheca
 - (d) Taxus
- (ix) Drug is used as emetic:
- (a) Agar
 - (b) Isabghul
 - (c) Ipecas
 - (d) Banana
- (x) Drug is used as antimalerial :
- (a) Ashwagandha
 - (b) Tulsi
 - (c) Ginseng
 - (d) Artemesia
- (xi) Is known as father of medicine?
- (a) Aristotle
 - (b) Dioscoride
 - (c) Hippocrates
 - (d) Galen
- (xii) Drug is not under the class of organized drug:
- (a) Leaves
 - (b) Flower
 - (c) Fruits
 - (d) Gums

(xiii) Drug is not under seed class:

- (a) Nux vomica
- (b) Digitalis
- (c) Stropantus
- (d) Ispgol

(xiv) Drug does not belonging to the leaves class:

- (a) Senna
- (b) Digitalis
- (c) Eucaliptus
- (d) Turmeric

(xv) Drug which does not belonging to the fruit class:

- (a) Artemesia
- (b) Fennel
- (c) Coriander
- (d) Colocynth

(xvi) Dried latex of the drug is used, except:

- (a) Opium
- (b) Gatta parcha
- (c) Papain
- (d) Balsam

Q.2 (a) How organized drug differ from unorganized drugs?

(b) Briefly describe the scope of Pharmacognosy.

Q.3 (a) Write the Pharmacognostic scheme.

(b) Write about the sources of drugs.

Q.4 (a) Write about system of classification of drugs.

(b) What do you mean by evaluation of drugs?

Q.5 (a) Describe various methods of evaluation.

(b) Explain what is adulteration, and it's type .

Q.6 Write about application of plant tissue culture in pharmacognosy.

Q.7 Describe briefly the composition and preparation of different nutrient media.

Q.8 What is plant growth regulators? Describe the role of plant growth regulators in the growth of plants.

Diploma in Pharmacy
First Year Main Examination, April-2021
Biochemistry & Clinical Pathology [DPY-104]

Time: 3:00 Hrs

Max Marks 80

Note: Attempt any five questions.

All questions carry equal marks.

Q.1 Attempt multiple choice questions.

(i) Which of following is common compound shared by TCA cycle and Urea Cycle.

- | | |
|------------------------------|------------------|
| (a) α – Ketoglutarate | (b) Succinyl COA |
| (c) Oxaloacetate | (d) Fumarate |

(ii) There are about _____ types of specialized cells in Human body.

- | | |
|---------|---------|
| (a) 250 | (b) 350 |
| (c) 450 | (d) 550 |

(iii) A eukaryotic cell is generally 10 to _____ μm in diameter.

- | | |
|---------|---------|
| (a) 400 | (b) 300 |
| (c) 200 | (d) 100 |

(iv) Sub-cellular organelles are _____ in prokaryotic cell.

- | | |
|----------------|------------|
| (a) Present | (b) absent |
| (c) Both a & b | (d) none |

(v) _____ is the largest cellular organelle in cell.

- | | |
|---------------------|------------------|
| (a) Golgi apparatus | (b) Lysosomes |
| (c) Nucleus | (d) Mitochondria |

(vi) _____ is the major site for purine nucleotide synthesis.

- | | |
|--------------------|------------|
| (a) Brain | (b) Liver |
| (c) adipose Tissue | (d) Kidney |

(vii) Nucleus contains _____ the repository of genetic information.

- | | |
|--------------|-------------|
| (a) Ribosome | (b) DNA |
| (c) Cytosol | (d) Vacuole |

(viii) The cellular matrix is collectively referred to as _____.

- | | |
|--------------|-------------|
| (a) Ribosome | (b) DNA |
| (c) Cytosol | (d) Vacuole |

- (ix) _____ is the programmed cell death or cell suicide.
- (a) Apoptosis (b) Autotosis
(c) Destrosis (d) None
- (x) Carbohydrates are precursors for many ____ compound
- (a) Organic (b) Inorganic
(c) Both a & b (d) none
- (xi) Monosaccharides is based on which of the following functional group
- (a) Phenol (b) Alcohol
(c) Ketoses (d) None
- (xii) The carbohydrate that is taken as a reference for writing the configuration of others
- (a) Dihydroxyacetone (b) Glyceraldehyde
(c) D-Erythrose (d) D-Xylose
- (xiii) If two monosaccharides differ in configuration around a single carbon atom, they are known as
- (a) Diastomers (b) Dimers
(c) Epimers (d) None
- (xiv) The non-carbohydrate moiety found in glycosides is known as
- (a) Aglycone (b) Aginine
(c) Both a & b (d) None
- (xv) Citrate Synthase is inhibited by _____.
- (a) ATP (b) Acetyl CoA
(c) ADH (d) Both a & b
- (xvi) Krebs Cycle is _____ in nature.
- (a) Anabolic (b) Catabolic
(c) Amphibolic (d) None
- (xvii) TCA cycle is actively involved in _____.
- (a) Gluconeogenesis (b) Phosphorylation
(c) Both a & b (d) None
- (xviii) One of the following enzymes in glycolysis catalyzes an irreversible action.
- (a) Hexokinase (b) Phosphofructokinase
(c) Pyruvate kinase (d) All of them

(xix) Synthesis of 2, 3-bisphosphoglycerate occurs in the tissue namely.

- (a) Liver (b) Kidney
(c) Erythrocytes (d) Brain

(xx) End product of glycolysis is _____.

- (a) Glucose (b) Pyruvic Acid
(c) Citric Acid (d) Glycogen

PART-B (Any 7)

Q.1 Write the glycolysis- pathway?

Q.2 Describe HMP shunt

Q.3 Discuss biological role of carbohydrate and lipid?

Q.4 Discuss Introduction, classification, chemical nature, of protein and amino acids?

Q.5 Write detail note on disorder of lipid metabolism?

Q.6 Describe Citric Acid Pathway in detail.

Q.7 Define Carbohydrate metabolism.

Q.8 What do you mean by Electron Transport chain

PART-C (Any 2)

Q.1 Give the significance of citric acid cycle

Q.2 Enlist names of various reagent used in carbohydrate detection

Q.3 Explain the process of gluconeogenesis

Diploma in Pharmacy
First Year Main Examination, April-2021
Human Anatomy & Physiology [DPY-105]

Time: 3:00 Hrs

Max Marks 80

Note: Attempt any five questions.

All questions carry equal marks.

Q.1 Attempt multiple choice questions.

1x16=16

(i) Name the largest part of the Alimentary canal?

- (a) Large Intestine
- (b) Small Intestine
- (c) Liver
- (d) Stomach

(ii) Chemical messengers secreted by ductless glands are called _____

- (a) Lymph
- (b) Platelets
- (c) Plasma
- (d) Hormones

(iii) How many chambers does the heart have?

- (a) Six
- (b) Five
- (c) Four
- (d) Three

(iv) What is the enzyme that breaks down lactose?

- (a) Lipase enzymes
- (b) Pepsin
- (c) Amylase
- (d) Lactase

(v) Which of the following is NOT an endocrine gland?

- (a) Hypothalamus
- (b) Pituitary
- (c) Parathyroid
- (d) Pancreas

(vi) The functional unit of the kidney is called a

- (a) Glomerulus
- (b) Nephron
- (c) Corpuscle
- (d) Calyx

(vii) Name the digestive juice that lacks enzyme but helps in digestion.

- (a) Bile juice
- (b) Pancreatic juice
- (c) Ptyalin
- (d) Pepsin

(viii) In which part of the respiratory system, gaseous exchange takes place?

- (a) Alveoli
- (b) Pharynx
- (c) Larynx
- (d) Trachea

(ix) These are tubes that carry blood back to the heart:

- (a) Arteries
- (b) Veins
- (c) Pipes
- (d) Tubas

(x) Gigantism and acromegaly are due to _____

- (a) Hyperthyroidism
- (b) Hyperpituitarism
- (c) Hypopituitarism
- (d) Hypothyroidism

(xi) The movement of blood through the heart and body is called:

- (a) Circulation
- (b) Locomotion
- (c) Ventriculation
- (d) Heart pump

(xii) Arrange the correct sequence of the steps involved in the process of Human Digestive System?

- (a) Digestion, Ingestion, Assimilation, and Absorption
- (b) Ingestion, Digestion, Absorption, and Assimilation
- (c) Absorption, Digestion, Assimilation and Ingestion
- (d) Assimilation, Absorption, Ingestion, and Digestion

(xiii) Which circulation, the heart provides your body with:

- (a) Oxygen
- (b) Nutrients
- (c) A way to get rid of waste
- (d) All of the above

(xiv) All of the following belong to the urinary system except:

- (a) Urethra
- (b) Ureter
- (c) Bladder
- (d) Prostate

(xv) Which wall separates the left side and right side of the heart?

- (a) Ventricle
- (b) Atrium
- (c) Septum
- (d) The great wall

(xvi) The structure that connects a kidney to the urinary bladder is the

- (a) Ureter
- (b) Urethra
- (c) Renal pelvis
- (d) Collecting duct

Attempt any four questions. Each question carries 16 marks.

Q.1 (a) Define endocrine glands and write the hormones and function of pituitary glands.

(b) Write the structure and function of liver

Q.2 (a) Write the various parts of central nervous system, and their functions.

(b) Write the physiology of urine formation.

- Q.3 (a) Explain brief information about cardiovascular disorder.
(b) Write the function of kidney. Draw well diagram of Urinary System.
- Q.4 (a) Explain composition of blood and write the functions of blood elements.
(b) Describe the coagulation of blood as well as their flow chart.
- Q.5 (a) Define Tissue. Write their Classification in brief.
(b) Write the anatomy and physiology of Heart.
- Q.6 (a) Write Structure of cell and write the function of its components.
(b) Write the various parts of digestive system, and their functions.

- (a) Vitamin A (b) Vitamin B
(c) Vitamin K (d) Vitamin E

(vii) Which of the following diseases is caused by protein deficiency?

- (a) Anaemia (b) Kwashiorkor
(c) Hypothyroidism (d) All of the above

(viii) AIDS, common cold, dengue fever and influenza are examples of _____.

- (a) Deficiency Disease (b) Infectious diseases
(c) Physiological Diseases (d) Non-infectious diseases

(ix) Amoxicillin, Doxycycline Azithromycin, and Penicillin are some examples of _____.

- (a) Bacteria (b) Pathogens
(c) Antibiotics (d) Vaccinations

(x) Which organ does hepatitis affect?

- (a) Heart (b) Brain
(c) Liver (d) Kidneys

(xi) Symptoms of malaria are ?

- (a) Fever (b) Chill
(c) Sweating (d) All of the above

(xii) Which of the following methods of infection control requires the use of an autoclave?

- (a) Sterilization (b) Sanitization
(c) Irradiation (d) Disinfection

(xiii) The genetic material in virus is

- (a) DNA and RNA (b) RNA only
(c) DNA only (d) DNA or RNA

(xiv) Which of the following are the primary causes of water pollution?

- (a) Plants (b) Animals
(c) Human activities (d) None of these

(xv) Which of the following techniques is used for reducing the total dissolved solids (TDS) in the water?

- (a) Osmosis
- (b) Ion exchange
- (c) Distillation
- (d) Both b and c

(xvi) Which of the following salts is the main cause of permanent hardness of water?

- (a) Magnesium sulphate
- (b) Magnesium bicarbonate
- (c) Magnesium carbonate
- (d) None of the above

Attempt any four questions. Each question carries 16 marks.

Q.1 (a) Explain Concept of Health. Define physical health, mental health, social health, spiritual health

(b) Define Malaria; write the life cycle of malaria parasite.

Q.2 (a) Write the types of vitamins and diseases induce due to deficiency of vitamins.

(b) Define First Aid. What should be treatment in emergency of shock.

Q.3 (a) Explain water pollution and write the process of purification of water.

(b) Write the Fundamental principles of microbiology and classification of microbes.

Q.4 (a) Define tuberculosis write its causative agents, mode of transmission and prevention.

(b) Define family planning and Demography cycle.

Q.5 (a) Explain Non-communicable diseases and write about Diabetes mellitus.

(b) Define Hepatitis and its classification.

Q.6 (a) Define Disinfection and types of disinfection procedures.

(b) Write Short note On:

- 1. Typhoid
- 2. Whooping cough