



PH-I/1(N)

August 2023

PHARMACEUTICS -I

Full Marks: 80

Time: 3hr

1A Write down the correct one. (Any ten)

1X10=10

- i) Eighth edition Indian Pharmacopoeia was Published on- a)2017, b)2018,c)2019,d)2020
- ii) Nylon is Polymer of...a) Phosphate, b) amide, c) Vinyl, d) Ethylene.
- iii) Source Amaranth is color is- a) Natural , b) Semi synthetic , c) Synthetic ,d) both a & b.
- iv) Ball Mill operated in the range of Critical speed- a) 20-30%, b)30-40%, c)50-70%, d)Above 70%.
- v) In RO Filter following filter use- a) Membrane filter b) Sediment filter c) Carbon filter, d)All a,b,c.
- vi) Example of Freeze Dried product is- a) Milk powder b) Coffee powder c) Vaccine d) All a,b,c.
- vii) Example of Infusion extract is- a)Morning tea,b)Morning coffee,c) Starch of Boiled rice,d)All a,b,c.
- viii) Example of Direct Compressed Tablet is- a) Aspirin b) Paracetamol, c) Antacid d)Metronidazole.
- ix) Vanishing Cream is Emulsion of - a) O/W, b) W/O, c) W/O/W, d) O/W/O.
- x) Corona Vaccine is preparation of - a) suspension, b) Emulsion, c) Solution, d) Lotion.
- xi) Respule is Dosage form of- a) Liquid, b) Semisolid, c) Gaseous, d) All a,b,c.
- xii) Sterile mean absolute free from all types of- a) Bacteria, b) Virus, c) Fungi, d) Microbes.

1B Fill the blanks OR Answer in one sentence. (Any ten)

1X10=10

- i) Father of Indian Pharmacy name is _____.
- ii) Another name of Type-II Glass is _____.
- iii) Full form of ABS Plastic is _____.
- iv) Example of Natural Coloring agents are _____.
- v) BCG Vaccine is Dried at _____ machine.
- vi) Example of Negative mixture is _____.
- vii) Syrup can be prepared from non sucrose sugar like _____.
- viii) Sieve no. 10 mean?

(ix) Very fine powder related with sieve No ____.

x) Define powder?

xi) Define primary Emulsion?

2. Answer any 10 (Ten) questions from the following:

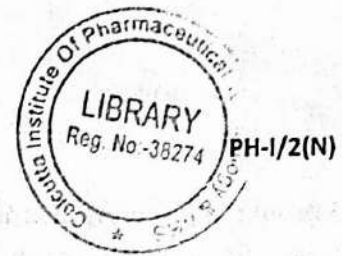
3x10

- i. Classify dosage forms with examples
- ii. Discuss the objectives of Size reduction.
- iii. Classify powders based on powder size.
- iv. Discuss the mechanisms of mixing.
- v. Discuss the ideal properties of packaging materials.
- vi. Discuss the official tests for assay of tablets
- vii. Write an explanatory note on tablet coating.
- viii. Discuss the manufacturing defects in tablets?
- ix. Briefly discuss the excipients used in capsule manufacturing.
- x. What do you mean by sterile dosage form? Discuss the ideal properties of sterile preparations.
- xi. Discuss the principles of good manufacturing practices.
- xii. What do you mean by NDDS? Why do we need NDDS?

3. Answer any 6 (Six) questions from the following.

5x6=30

- a) Define Ointment. Discuss the method (any one) of preparation of ointment. 1+4
- b) Define emulsion. Explain the role of Emulsifying agents, preservatives & antioxidants with examples in emulsion preparation. 1+4
- c) Discuss the factors affecting the rate of filtration. Name any two filter media used in Laboratory 4+1
- d) Define Extraction. Briefly discuss..... a) Maceration, b) Percolation. 1+2+2
- e) Discuss in details the tablet manufacturing processes by granulation methods. 5
- f) What do you mean by QC & QA? Differentiate between QC & QA. 2+3
- g) Write about contents of IP. 5



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PHARMACEUTICAL CHEMISTRY

Time Allowed: 3 Hours

Full Marks: 80

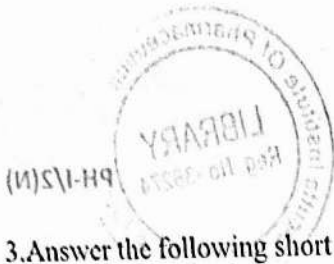
Answer all questions as directed.

1. Choose the correct alternative (any ten): 10x1

- i. Arsenic limit test is done in:
a. Nessler cylinder. b. Gutzeit apparatus. c. Test tube d. Conical flask.
- ii. Magnesium hydroxide gel is used as:
a. Antacid. b. Haematinics c. Cardiotoxic. d. Diuretics.
- iii. Starch with iodine gives ___ colour:
a. Red. b. Green. c. Blue. d. Black.
- iv. Naloxone is :
a. Analgesic b. Antipyretic c. Morphine antagonist d. Antacid.
- v. Cold is any temperature between:
a. -2 to 0°C. b. 2 to 8°C c. 4 to 10°C. d. 8 to 15°C.
- vi. SSRI stands for:
a. Selective serotonin reuptake inhibitor. b. Selective serum reuptake inhibitor.
c. Selective serotonin reabsorption inhibitor d. None of these.
- vii. Epilepsy is:
a. CNS disease, b. CVS disease. c. ANS disease, d. Liver disease.
- viii. Calmposesis:
a. Antibiotic. b. CNS stimulant. c. CNS depressant. d. Antipyretic.
- ix. Which drug gets darkened while exposure to light –
a. Paracetamol b. Aceclofenac c. Celecoxib d. Mefenamic acid
- x. Azithromycin is: an antibiotic of the group:
a. Beta lactam b. Polyene c. Macrolide d. None of these.
- xi. INH is therapeutically used in:
a. Malaria b. Gonorrhoea c. Tuberculosis d. UTI.

2. Fill in the blank with appropriate word/words (any ten): 10x1

- a) The colour of the $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ is _____.
- b) Arsine gas reacts with mercuric chloride paper to produce _____ stain.
- c) In heterocyclic compounds, nitrogen is prefixed as _____.
- d) Quinolone drugs are generally suffixed with _____.
- e) Co-trimoxazole is made up of two different medicines named _____ and _____.
- f) Cancer which originates from bone or cartilage is known as _____.
- g) Example of an adrenergic agonist which contains imidazole ring is _____.
- h) Propranolol is a _____ receptor blocker.
- i) Full form of ORS is _____.
- j) On hydrolysis, aspirin produces _____ and _____.
- k) _____ is a synthetic morphine analogue.



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3. Answer the following short answer type questions (any ten):

- a) Write the sources of impurities.
- b) Write a short note on different types of dentifrices.
- c) Write note on anti-tubercular agents. Note on Rifampicin.
- d) Define antifungal agents and osmotic diuretic with examples.
- e) Write a note on different types of insulin.
- f) What are the various steps involved in precipitation gravimetry?
- g) What are antacids? Classify antacids with suitable examples.
- h) Write down the heterocyclic ring (any three) of Furan, Thiazole, Indole, Pyrrole, Imidazole.
- i) Note on Remdesivir and Chloroquine phosphate.
- j) Define Antianginal drugs with examples.
- k) Classify sulphonamides with examples.

4. Answer the following long answer type questions (any six):

- a) Write a note on "Oxygen-as medical gas".
- b) Describe the process for Limit test for Chloride
- c) Describe 'Accuracy' and 'Precision' with example.
- d) Define and classify anti-arrhythmic agents with example. Name one anti-arrhythmic agent which is also used as Local anaesthetics.
- e) Define Antibiotic. Classify them. Give a brief account of Amoxicillin.
- f) Write about Antineoplastic agents. Classify with examples.
- g) Write briefly on Topical agents and Loop diuretics.
- h) Write down the chemical structures and chemical name of ASPIRIN and FRUSEMIDE.

6x5



August 2023

PH-I/4(N)

Time Allowed: - 3 hrs.

HUMAN ANATOMY AND PHYSIOLOGY

F.M. 80

1. Answer the following:

A. Choose the correct alternative (five) :-

1x5=5

- i. Normal value of Tidal volume is a) 200, b) 300, c) 500 and d) 700ml.
- ii. Which blood group is called universal donor? a) A, b) AB, c) O and d) B .
- iii. T3 and T4 hormones are secreted by a) Pituitary, b) Adrenal, c) Pancreas and d) Thyroid gland.
- iv. Ptyalin is an enzyme found in a) Pancreatic juice, b) Gastric juice, c) Intestinal juice and d) Saliva.
- v. Which organ has both endocrine and exocrine functions? a) Pancreas, b) Liver, c) Stomach and d) kidney.

B. Fill in the blanks (fifteen)

1x15=15

- i. Normal clotting time of blood is _____
- ii. Mitral valve is also known as _____
- iii. The midbrain lies between the thalamus & _____
- iv. The hormone secreted by the testes is _____.
- v. Right lung has _____ lobe(s).
- vi. Functional unit of the kidney is called _____

- vii. Increase of RBC count is known as _____
- viii. The appearance of blood in urine is called _____
- ix. Bone is a _____ tissue.
- x. The lungs are covered by a membrane called _____
- xi. Longest bone of the body is _____
- xii. Bile is stored in _____.
- xiii. _____ secreted by pancreas regulates the entry of glucose into the cell.
- xiv. Hydrochloric acid is secreted from _____ cell of stomach
- xv. Food does not enter trachea due to the presence of _____.

2. Answer the following question (any ten)

3X10=30

- a) Why mitochondria are called as power house of cell?
- b) Write the difference between endocrine and exocrine glands.
- c) Write the composition of blood.
- d) Classify nervous system
- e) What are the functions of Medulla Oblongata?
- f) Define Cardiac output & discuss the factors affecting it.
- g) Write short notes on Rod & Cone cells.
- h) Define vital capacity, expiratory reserve volume of lung, tidal volume of lung.
- i) Write the mechanism of blood coagulation.
- j) Draw and label the different parts of human eye.
- k) What are the changes involved in male during puberty?
- l) Write a net diagram of nephron of a kidney

3. Answer any 6 questions

5 X 6 = 30

- a) Define tissue. Enlist its types.
- b) Discuss in details conducting system of the heart.
- c) Write about the process of digestion in the stomach and small intestine.
- d) Define joint or articulation. Explain various types of joints.
- e) Explain mechanism of hearing.
- f) Explain the different stages of urine formation
- g) Give an account on menstruation cycle giving correlation with female hormones.