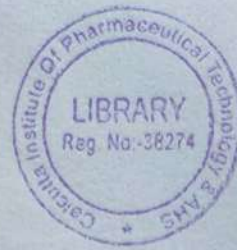


PHARMACOLOGY



Time Allowed: 3 Hours

Full Marks: 80

1. Choose the correct alternative (any ten):

1×10=10

- i) Rifampicin acts by inhibiting the synthesis of bacterial ____ (RNA / DNA / Protein / Cell wall).
- ii) An example of muscarinic receptor antagonist is ____ (Acetylcholine / Atropine / Adrenaline / Dopamine).
- iii) Furosemide causes all, except ____ (Hypercalcemia / Hypokalaemia / Ototoxicity / Hyperuricemia).
- iv) An example of prodrug is ____ (enalapril / penicillin / gentamycin / streptomycin).
- v) An antineoplastic antibiotic is ____ (Methotrexate / Doxorubicin / 6-Thioguanine / 5-Fluorouracil).
- vi) All the narcotic analgesic acts on ____ (Chemoreceptor / Mechanoreceptor / Photoreceptor / Opiate receptor).
- vii) A very popular drug to treat Myasthenia gravis is ____ (Aspirin / Verapamil / Pyridostigmine / Propranolol).
- viii) Metronidazole is used as ____ (Anthelmintics / Antitubercular agent / Anti amoebic agent / Antimalarial agent).
- ix) Dimercaprol is known as ____ (PAM / BAL / PAS / DMC)
- x) Indomethacin is ____ (Aphrodisiac / Non-steroidal anti-inflammatory / Sedative / Anti-emetic) drug.
- xi) Example of oral hypoglycaemic is ____ (chlorpropamide / tolazamide / metformin / all).

2. Define the following terms (any ten):

1×10=10

- i) Drug tolerance
- ii) Pharmacokinetics
- iii) Cycloplegia
- iv) Diuretics
- v) Therapeutic index
- vi) Chemotherapeutics
- vii) Synergism
- viii) Meiotics
- ix) Cardiotonics
- x) Tranquilizers
- xi) Analgesics

3. Answer the following questions (any ten):

3×10=30

- i) Discuss about the various factors affecting drug metabolism.
- ii) Write the Mode of Action of Benzodiazepines.
- iii) List the drug of choice in myasthenia gravis.
- iv) Write a short note on Local anaesthetics.
- v) Write a short note on Beta blockers- Give examples and uses of these drugs.
- vi) Write the Mechanism of action of Sulphonamides.
- vii) What are antithyroid drugs? Explain the disorders related to thyroid hormones.
- viii) What are NSAIDs? Write the uses of NSAIDs.
- ix) Write a short note on ulcer healing agents.
- x) Give reasons- Drug combination is preferred in tuberculosis treatment rather than single drug treatment.
- xi) Give reasons- Insulin is not administered orally.
- xii) Give reasons- Tetracycline is not given with milk.

4. Answer the following questions (any six):

5×6=30

- i) Write a short note on Glaucoma.
 - ii) What are diuretics? Classify diuretics with suitable examples.
 - iii) Write a short note on Oral hypoglycaemic agents.
 - iv) Write down the chemotherapy of malaria.
 - v) Explain the antitussive drugs with examples.
 - vi) Write the MOA of sulphonamides.
 - vii) Write causes and symptoms of depression. Classify antidepressants with examples.
 - viii) Define cardiac arrhythmia. Classify anti-arrhythmic agents with examples.
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2023

HOSPITAL & CLINICAL PHARMACY



Time Allowed: 3 Hours

Answer all questions as directed.

1. Choose the correct alternative (any ten):

1x10=10

- i) Tertiary care means -- a) Higher level of speciality care, b) Lower level of speciality care, c) Higher level of critical care, d) Lower level of critical care.
- ii) GPP means-- a) Good Pharmacy Practices, b) General Pharmacy Practices, c) Goods Procurement Practices, d) General Purchase Protocol.
- iii) ASHP guidelines are the standard for -- a) Clinical services, b) Blood bank services, c) Radiological services, d) Pharmacy services.
- iv) BMR stands for – a) Body mass representation, b) Basic metabolic rate, c) Basal metabolic rate, d) None.
- v) The dosage form which requires sterilization is – a) Mouthwash, b) Ointments, c) Eye drops, d) Suppositories.
- vi) Identify the radiations not emitted by radioisotopes – a) Alpha, b) Beta, c) Gamma, d) Delta.
- vii) Pyrexia means – a) Nausea, b) Headache, c) Fever, d) Pain.
- viii) Which statement is incorrect regarding schedule H drugs? – a) These are OTC drugs, b) Appendices under Drugs and cosmetic rule, 1945, c) Dangerous to take without medical advice, d) Cannot be purchased without prescription of registered medical practitioner.
- ix) The Walk-in-cold rooms are used for 'bulk' storage of – a) Soft gelatin Capsules, b) Packaged Drinking Water, c) Vaccines, d) Suppositories.
- x) All are medical information retrieval systems except:- a) MEDLARS b) MEDLINE c) BIOSIS d) COMPUWARE.
- xi) Radio-pharmaceutical should be stored in: a) Refrigerator b) Lead container c) Glass container d) all of them.
- xii) Idiosyncrasy is: a) Type A ADRs, b) Type B ADRs, c) Type C ADRs, d) Type D ADRs.

2. Fill in the blanks: (any ten)

10x1=10

- i) UDDS is the abbreviated form for _____.
- ii) Iodine 131 is used to treat _____.
- iii) PvPI is the abbreviated form for _____.

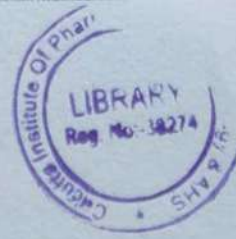
- iv) Post marketing surveillance of drugs is a _____ activity.
- v) NICU is the abbreviated form for _____.
- vi) A surgical procedure in which a baby is delivered through a cut in the abdomen and uterus is termed _____.
- vii) A 200 bed hospital should have _____ Pharmacists.
- viii) NDPS is the abbreviated form for _____.
- ix) The temperature range for Cool Storage condition is _____.
- x) A 25 years old female with Blood Haemoglobin 9g/dL is _____.
- xi) CDSCO is the abbreviation for _____.

3. Answer the following questions (any ten): 10x3=30

- i) Write a note on Schedule H1 drugs.
- ii) Write a short note on NABH.
- iii) Define Medication error and mention its common consequences.
- iv) Write down the composition of PTC in a hospital.
- v) Write a brief note on Type-A Reactions of ADR.
- vi) Explain the procedure for dispensing narcotic & psychotropic drugs.
- vii) Explain the term EOQ.
- viii) Explain the term LASA medicines with examples.
- ix) Write a brief note on APGAR Score.
- x) Write in brief about Drug Information Centre and its activities.
- xi) Write down the six standards for Maternal & Child Health services as per the NQAS for Public Health facilities in India.

4. Answer the following questions (any six): 5x6=30

- i) Explain in details the importance of Patient Counselling. 5
- ii) What is a cold chain system? Write about the role of Pharmacist in maintaining Cold Chain. 2+3
- iii) Explain the steps involved in the procurement of drugs through tender for a Hospital Pharmacy. 5
- iv) Define Bulk compounding. What are the general requirements for IV admixture? 2+3
- v) Define Clinical Pharmacy. Discuss in detail the role of a clinical pharmacist. 1+4
- vi) Explain how Hospital Pharmacists can influence on Prescribing in line with Theme-2 of FIP Basel Statement. 5
- vii) Explain the significance of liver function tests and kidney function tests in evaluation of diseases. 2½+2½



PH-II/6(N)

2023

PHARMACY LAW AND ETHICS

Time Allowed: 3 Hours

Full Marks: 80

1. Choose the correct alternative:

1x10=10

- i) "Ampicillin capsule should be used within 24 Months" – This statement comes under the
a) Scheduled C b) Scheduled M c) Scheduled R d) Scheduled P
- ii) The Drugs and Magic Remedies Act was passed with the main objective _____
a) To control certain types of advertisement
b) To prohibit certain types of advertisements related to false claims
c) Both a) and b)
d) None of the above
- iii) The main objection of the Poisons Act was _____
a) To achieve adequate supply
b) To achieve equal distribution
c) To import poisons
d) To regulate and Control of Import, Possession, and sale of Poisons
- iv) Advertisement of drug claiming to cure a disease mentioned in Schedule J is _____
a) Permitted above b) Exempted c) Prohibited d) None of the above
- v) For treating animal cruelty how much fine has to be imposed for the first conviction?
a) 50 b) 100 c) 150 d) 200
- vi) Ethics means?
a) Rules of human conduct binding on all persons of state or nation
b) Rules by which a profession regulates action and sets standards for all its members
c) Both a) & b)
d) None of the above
- vii) The Right of a patented drug is
a) 10 years b) 15 years c) 20 years d) 25 years
- viii) Standard for mechanical contraceptive comes under schedule as per drugs and cosmetic act
a) R b) R₁ c) S d) O
- ix) Ex- Officio member of Central Council is
a) Officer in charge of drug control administrative b) Govt. analyst of each state
c) Chief Medical Officer d) The Controller of India

- x) Schedule C is related to
- a) List of biological and immunological products
 - b) List of homeopathy products
 - c) List of Ayurvedic products
 - d) List of allopathic products

2. Define the following terms/ Fill in the blanks:

1x10=10

- i) Define consumer.
- ii) The Disaster Management Act was passed on _____
- iii) The Prevention of Cruelty Act was passed on _____
- iv) Define Drugs.
- v) Define Medical Device
- vi) MTP Act was passed in the year _____
- vii) Define Loan license.
- viii) Pharmacy Council of India consists of _____ nominated member by the Central Govt.
- ix) "Practice of Pharmacy" means _____
- x) Define spurious drugs.

3. Answer the following questions (any ten):

3x10=30

- i) State the objectives of the Consumer Protection Act.
- ii) Write the qualifications of the Food Safety Officer.
- iii) Discuss under what circumstances termination of pregnancy is legal.
- iv) Describe the salient features of the Clinical Establishments Act.
- v) Write a brief note on Bioethics.
- vi) Describe generic medicine.
- vii) Explain the "emergency use of authorization".
- viii) Give the constitution of the state Pharmacy Council.
- ix) Add a note on Central Drug Laboratory.
- x) Write the qualifications for a Govt. Analyst.
- xi) Discuss medical devices with examples.

4. Answer the following questions (any six):

5x6=30

- i) Describe clinical trials. Explain briefly the various phases of clinical trials.
- ii) Draw a table of solubility and permeability characteristics of drug substances based on BCS sub-classification.
- iii) Write the qualifications, duties, and responsibilities of the drug inspector.
- iv) Discuss the constitution and function of PCI.
- v) Write, in short, the objectives, offenses, and punishment under the Narcotic Drugs and Psychotropic Substances Act, 1985.
- vi) Give the general procedure and conditions for obtaining a license for the sale of a drug under the Drugs and Cosmetics Act, 1940.
- vii) Provide the calculating formula for the ceiling price of the scheduled formulation.



PH-II/4(N)

2023

PHARMACOTHERAPEUTICS

Full Marks: 80

Time Allowed: 3 Hours

Answer all questions as directed.

1 × 10 = 10

1. Choose the correct alternative (any ten):

- i) The first line lipid lowering agent is _____.
(a) amlodipine (b) gemfibrozil (c) atorvastatin (d) Metformin
- ii) Which drug is the trigger factor for asthma _____.
(a) insulin (b) aspirin (c) salbutamol (d) vitamin K
- iii) Celecoxib is used for the treatment of _____.
(a) covid 19 (b) conjunctivitis (c) psoriasis (d) osteoarthritis
- iv) Methotrexate is used for the treatment of _____.
(a) ulcerative colitis (b) rheumatoid arthritis
(c) psoriasis (d) all of them
- v) The drug, that acts as alpha and beta blocker is _____.
(a) Atenolol (b) Acebutanol (c) Metoprolol (d) Labetalol
- vi) The disease associated with destruction of the optic nerve is _____.
(a) Conjunctivitis (b) Glaucoma (c) Cataract (d) Blepharitis
- vii) The condition in which gastric contents flow back into the oesophagus is _____.
(a) Asthma (b) GERD (c) Peptic Ulcer (d) Appendicitis
- viii) The causative agent of COVID19 is _____.
(a) SARS-COV (b) SARS-COV-2
(c) H1N1 influenza virus (d) Cytomegalo virus
- ix) Angina is a clinical syndrome characterized by discomfort of _____.
(a) Chest (b) Shoulder (c) Left arms (d) All of the above
- x) Myxoedema is associated with _____.
(a) Hypothyroidism (b) CHF (c) Hypertension (d) Hyperthyroidism
- xi) Tonic-clonic seizure is also known as _____.
(a) Grand mal epilepsy (b) Petit mal epilepsy
(c) Absence seizure (d) Febrile seizure
- xii) Migraine is a _____ disorder.
(a) vascular (b) neuronal (c) neurovascular (d) pulmonary

2. Fill in the blanks or very short answer type question: (any ten)

1 × 10 = 10

- i) GERD stands for _____.
- ii) Name two causative agent for complicated UTI.
- iii) Miliary tuberculosis is defined as _____.
- iv) Pharmacological management of Diabetes mellitus
- v) Depression is defined as _____.
- vi) What is various hypothesis involved in Alzheimer's disease?
- vii) Secondary osteoarthritis is defined as _____.
- viii) Malaria is caused by which microorganisms?
- ix) Non-pharmacological management of Migraine.
- x) What is Dysmenorrhea?
- xi) Define hypertension.

3. Answer the following questions (any ten):

3 × 10 = 30

- i) Write the objectives of Pharmacotherapeutics.
- ii) Mention various risk factors of COPD.
- iii) Classify oral anti-hyperglycaemic agents in diabetes mellitus.
- iv) Write in brief on diagnosis and management of rheumatoid arthritis.
- v) Mention various risk factors of psoriasis.
- vi) Explain different types of conjunctivitis.
- vii) Differentiate between different types of hepatitis.
- viii) Write short note on Gonorrhoea.
- ix) Explain non-pharmacological Management of depression.
- x) What is an opportunistic infection? Enlist tests for diagnosis of HIV/AIDS.
- xi) Write a note on pharmacological management of hyperlipidaemia.

1+2

4. Answer the following questions (any six):

- i) Define angina and myocardial infarction. Classify angina. 5 × 6
- ii) Define the term epilepsy and status epilepticus. Classify different types of epilepsy. 1½+1½+2
- iii) Define standard treatment guidelines (STG). Write its advantages. 1½+1½+2
- iv) Write a note on investigation, diagnosis and pharmacological management of rheumatoid arthritis. 2+3
- v) Write the clinical manifestation and pharmacological management of Malaria. 2½+2½
- vi) Define and classify anaemia. 2½+2½
- vii) Write non pharmacological and pharmacological management of stroke. 2½+2½
- viii) Define and explain rational use of medicines. Write advantages of essential medicine list. 2½+2½



2023

COMMUNITY PHARMACY & MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 80

Answer all questions as directed.

1. Choose the correct alternative (any ten): 1×10
- i) Mammogram is done to look for early signs of _____.
a) Breast cancer b) Bone disorder c) Anaemia d) Sore throat
 - ii) Patient counseling helps to _____.
a) Develop business b) Time pass
c) Know chemical structure d) To motivate a patient to take medicine
 - iii) Loperamide is used in the treatment of _____.
a) Vomiting b) Constipation c) Diarrhoea d) Sore throat
 - iv) Preparation of SOPs in pharmacy is responsibility of
a) Drug inspector b) Pharmacy assistant
c) Pharmacist d) None
 - v) Which of the following Skills are important to communicate properly?
a) Reading b) Speaking c) Writing d) All of These
 - vi) Pap Smear test is used for diagnosis of _____.
a) Lung Cancer b) Blood Cancer c) Skin Cancer d) Cervical Cancer
 - vii) Patient care service include _____.
a) Diagnosis b) Prophylaxis. c) Both (a) & (b) d) None of the above
 - viii) World No Tobacco Day is observed on _____.
a) 5th April b) 31st May c) 5th June d) 2nd July
 - ix) Which one is not a STDs?
a) AIDS b) Syphilis c) Cancer d) Gonorrhoea
 - x) Identify the anti-itching agent –
a) Calamine b) Salicylic acid c) Permethrin d) Mupirocin
 - xi) Pharmacists are the world's _____ largest healthcare professionals.
a) 1st b) 2nd c) 3rd d) 4th
2. Fill in the blanks or very short answer type question: (any ten) 1×10

- i) In Community Pharmacy, "PIL" stands for _____.
- ii) In Inventory Control, ABC stands for _____.

- iii) _____ is example of Online Pharmacy Store.
- iv) _____ is an example of a Pharmacy software.
- v) Pharmacists are registered under the Pharmacy Act _____.
- vi) BMI Stands for _____.
- vii) Warts are caused by the _____ virus.
- viii) Lactulose is used as _____.
- ix) PPE stands for _____.
- x) _____ test is done for the diagnosis of typhoid fever.
- xi) The minimum area required to open a wholesale drug store is _____.
- xii) According to ER-2020, the practical training for Pharmacists shall not be less than _____ hours.

3. Answer the following questions (any ten):

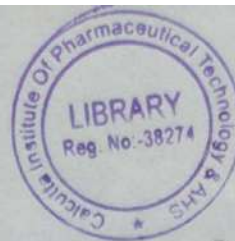
3×10

- i) Enlist the steps of dispensing process.
- ii) Briefly discuss the importance of health screening services.
- iii) Enlist the documents required to open a retail drug store.
- iv) Name a book of original entry. Draw a neat blank format of a three columnar cash book.
- v) Describe shortly the pharmaceutical pictogram.
- vi) Discuss the causes of dispensing errors.
- vii) Write a note on Self-medication
- viii) What is community Management?
- ix) Explain the role of pharmacist in pain management.
- x) Discuss the benefits of patient counselling.
- xi) Write the general medicines which can be used as OTC.

4. Answer the following questions (any six):

5×6

- i) Enlist and explain the different parts of prescription.
- ii) Discuss the structural guidelines of Good Pharmacy Practice.
- iii) Define Inventory. Discuss the following inventory control systems (any one): (a) Perpetual inventory management system, (b) ABC analysis.
- iv) Define communication skill. Write on three different communication skills. 2+3
- v) Discuss about pain management and their possible treatment. 3+2
- vi) Explain the role and responsibilities of community pharmacist in dispensing the drugs. 2½x2
- vii) What do you mean by online pharmacy and how is it useful to the consumers? 2½x2
- viii) What is diabetes? What is its cause, symptoms and side effects? What are the known pharmacological patient counseling point for diabetes management? 1+1+1+1+1



Time Allowed: 3 Hours

Full Marks: 80

1. Choose the correct alternative (any ten) 1x10=10
- Normal level of serum bilirubin is- (a) less than 1mg/dL (b) 2.5 mg/dL (c) 10 mg/dL (d) None of these.
 - Acetoacetic acid is a- (a) Ketone body (b) Amino acid (c) Bile acid (d) None of these.
 - One example of Heteropolysaccharide is – (a) Hyaluronic acid (b) Cellulose (c) Starch (d) Raffinose.
 - An example of basic amino acid is – (a) Arginine (b) Asparagine (c) Aspartic acid (d) None of these.
 - Deficiency of vitamin D leads to -(a) Cancer (b) Scurvy (c) Ricket (d) None of these.
 - Lactose is composed of ____ and glucose: (a) Fructose (b) Galactose (c) Sucrose (d) None of these.
 - Human body contains about ____ % water- (a) 30 (b) 40 (c) 70 (d) 99.
 - Mostly enzymes are ____ in nature- (a) Lipid (b) Sugar (c) Protein (d) None of these.
 - Starch with iodine gives ____ colour- (a) Red (b) Green (c) Blue (d) None of these.
 - Reducing sugar contain free - a) Carboxylic acid, b) Aldehyde c) Alcohol and d) Alkane group.
 - The inactive form of enzyme is – (a) Proenzyme (b) Zymogen (c) Zymase (d) Both (a) & (b).
 - The nitrogenous base not present in DNA structure – (a) Adenine (b) Guanine (c) Cytosine (d) Uracil.
2. A. Define the following terms (any five)- 1x5
i) Iodine number, ii) Microminerals, iii) Co-enzyme, iv) Metabolic Water, v) Polycythaemia
vi) Cholesterol
- B. Fill in the blanks (any five) - 1x5
- Full form of NADP is _____.
 - Full form of SGPT is _____.
 - The detection of HIV is confirmed by _____ test.
 - Example of semi essential amino acid is _____.
 - Gaucher's disease is caused by deficiency of enzyme _____.
 - The amino acid that does not participate in transamination _____.
3. Answer the following questions (any ten)- 3x10=30
- What is 'Mutarotation'?
 - Briefly enumerate the major pathways of carbohydrate metabolism.
 - Calculate ATP generation per molecule of glucose in glycolysis.
 - "The backbone of nucleic acid structure is 3'-5' phosphodiester bridge."—justify.
 - Classify enzyme according to IUB system.
 - Explain briefly ketogenesis.
 - Write about the functions and deficiency diseases of vitamin A.
 - Write in tabular form about water turnover and balance in human body.
 - Write a brief note on important contributions of Biotechnology in human welfare.
 - Write a brief note on disorders associated with abnormal metabolism of carbohydrates.
 - Write a note on Competitive Inhibition of enzyme.
 - What are the various tests performed to determine the quality of lipids?
4. Answer the following questions (any six)- 5x6=30
- Write down the source, physiological functions and deficiency symptoms of Calcium and Iron.
 - Classify carbohydrates with examples. Write down the functions of carbohydrates. (3 + 2)
 - Write in brief about different structures of proteins.
 - Write short notes on Lipid metabolism with reference to β -oxidation of palmitic acid.
 - Explain briefly the structure of RNA or DNA.
 - Explain briefly about different factors affecting enzyme activity.
 - Mention the abnormal constituent of urine with their significance in diseases.
 - Identify and write down the four oxidative steps in Krebs' Cycle.