

24225

03 Hours / 80 Marks



20221

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any SIX of the following:** **30**
- a) Define Drug absorption. Explain the physiological factors affecting drug absorption.
 - b) Classify Anti-arrhythmic Drugs. Write side effects and Therapeutic uses of Quinidine.
 - c) Define and classify Anti-emetics. Write down therapeutic applications of antiemetics.
 - d) Define and classify oral Hypoglycemic agents. Write side effects of Insulin.
 - e) Define and classify Anti-Neoplastic agents with examples.
 - f) Define Analgesics and antipyretics. Classify Non steroidal Anti-Inflammatory Drugs.
 - g) Classify General anaesthetics. Write down properties of Ideal General Anaesthetics.
2. **Attempt any TEN of the following:** **30**
- a) Classify Anti-hypertensive Drugs with eg.
 - b) Define and classify parasympathomimetics.
 - c) Define coagulants and anticoagulants. Write two therapeutic uses of anticoagulants.
 - d) Write three advantages and disadvantages of parenteral route of drug administration.
 - e) Define and classify Sedatives and Hypnotics.
 - f) Define and classify anti-asthmatic drugs.
 - g) Define and classify diuretics with examples.
 - h) Explain Mechanism of action and T. uses of penicillin.
 - i) Define anti-histaminics. Write side effects and therapeutic uses of H₁-Receptor antagonists.
 - j) Define and classify Antithyroid Drugs. Write contraindications of corticosteroids.
 - k) Explain why Tetracycline is contra-indicated with milk.

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 - (5) In case student has attempted sub-question of question no. 3 more than once, only first attempt should be considered for assessment.

Marks

1. **Attempt any SIX of the following:**

30

- a) Enumerate the techniques of inventory control. Explain methods for determination of EOQ.
- b) Define OTC medications. Discuss the OTC medications in India and need for counselling for OTC products.
- c) Define prescription. Explain the different parts of prescription.
- d) Brief on steps involved in procurement process.
- e) What advice should a pharmacist give for self care for constipation and vomiting.
- f) Discuss the commonly used day books in detail.
- g) Explain the stages of patient counselling.

2. **Attempt any TEN of the following :**

30

- a) Illustrate the factors influencing medication non-adherence.
- b) Explain the benefits of pharmacy operation softwares.
- c) Compare and contrast between formal and informal communication.
- d) Describe the development of community pharmacy in India.
- e) Summarize different approaches to the health screening with it's significance.
- f) Classify communication. Describe verbal communication skills.
- g) Discuss the role of pharmacists in promoting the safe practices during self medication.
- h) Define customer relation management. Why there is need for customer relation management ?
- i) Enlist the patient counselling tips for Asthma.
- j) Enumerate the causes of dispensing errors. Discuss the strategies to minimise the dispensing errors.
- k) State the contents of SOP.

P.T.O.

**3. Attempt ALL questions of the following :**

- a) Define community pharmacy.
- b) Good pharmacy practice for community pharmacy setting is developed by
 - i) WHO and FIP
 - ii) WHO
 - iii) FIP
 - iv) UNICEF
- c) Name the categories into which pharmaceutical pictograms are classified.
- d) How is hypertension different from normal blood pressure.
- e) Classify health screening services.
- f) State any two differences in dispensing prescription medications and OTC medications.
- g) List any two online pharmacies in India.
- h) Following are different types of MHealth Apps except.
 - i) Remote monitoring apps
 - ii) Productivity apps
 - iii) PharmEasy
 - iv) Clinical and diagnostic apps
- i) Define good pharmacy practice.
- j) Give any two advantages of selecting a rural location for opening a pharmacy.
- k) State the meaning of "Store in a cool place."
- l) Enlist any two factors to be considered while selection of site for opening a pharmacy.
- m) Name any two OTC products used for diarrhoea.
- n) Which of the following is likely to improve medication adherence ?
 - i) Patient counselling
 - ii) Offering discounts on medicines.
 - iii) Telling the ADRs associated with medications.
 - iv) Avoiding talking about ADRs associated with medications.
- o) What is the normal value of fasting blood glucose level ?
- p) Define self medication
- q) Classify audits in a pharmacy.
- r) Define patient package inserts.
- s) Under which of the following scheme a customer is allowed to draw cheques even if there is no balance amount standing to the credit.
 - i) Over draft
 - ii) Cash credit
 - iii) Loans
 - iv) Discounting of bills
- t) Enlist the benefits of patient counselling.

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20223

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Instructions –

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- (3) Illustrate your answers with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
- (6) In case, multiple answer options are observed for the same sub question of question No. 3, the options appearing first in the answer book shall be treated as answer and assessed accordingly.

Marks

1. **Attempt any SIX of the following:** 30
- a) Define the term 'Enzyme'. Enlist the factors affecting enzyme activity. Explain effect of substrate concentration and temperature on rate of enzyme catalysed reaction.
 - b) Explain beta-oxidation of unsaturated fatty acid with energetic of palmitic acid.
 - c) Enlist various qualitative tests of carbohydrates. Explain significance and procedure of Molisch's Test and Benedict's test.
 - d) Give the schematic representation of overall view of TCA cycle.
 - e) Describe lipid profile tests with its clinical significance.
 - f) Explain secondary structure of protein.
 - g) Discuss in brief the steps involved in Glycolysis and give its energetic.
2. **Attempt any TEN of the following :** 30
- a) Name abnormal constituents of urine with the disease associated with them.
 - b) What are minerals? Give biochemical functions and deficiency disorders of calcium.
 - c) Explain ETC chain and oxidative phosphorylation.
 - d) Explain Watson and Crick model of DNA.
 - e) Give source, chemical nature, functions and deficiency diseases of Vitamin A.
 - f) What are fatty acids? Classify it based on chemical structure and nutritional requirements with examples.
 - g) Define
 - i) Carbohydrates
 - ii) Vitamins
 - iii) Aminoacids
 - h) Define the term 'Dehydration'. Give its causes. Write any one formula of ORS mixture.
 - i) Enlist various tests used for assessment of kidney functions. Explain GFR.
 - j) What is anaemia? What are the different types of anemias ?
 - k) State the causes of –
 - i) Phenylketonuria
 - ii) Alkaptonuria
 - iii) Ketoacidosis

P.T.O.



3. Attempt ALL question of the following :

- Co-enzyme A is a co-enzyme form of Vitamin _____.
- Draw structure of cholesterol.
- Write full form of DNA and RNA.
- Match the followings.

1. Glucose	a) Hematuria
2. Homogentisic acid	b) Jaundice
3. Bile Pigment	c) Alkaptonuria
4. Blood	d) Glycosuria

Options

- A. 1-d, 2-c, 3-b, 4-a B. 1-b, 2-d, 3-a, 4-c
 C. 1-d, 2-b, 3-a, 4-c D. 1-d, 2-b, 3-c, 4-a
- True or False: The prokaryote cell has a nucleus.
 - Draw structure of any one monosaccharide.
 - Write the meaning hyperkalemia and hypokalemia.
 - Define biochemistry.
 - Name coenzyme derived from the Vitamin B₁.
 - The reaction identifies presence of peptide bond is _____.
 A. Ninhydrin reaction B. Xanthoproteic reaction.
 C. Molisch's reaction D. Biuret reaction
 - Give two examples of Polysaccharide.
 - Define nucleoside.
 - What are normal bilirubin levels in adults?
 - In conjugated proteins, when the prosthetic group is carbohydrates, it is known as _____.
 - What is Polycythemia Vera.
 - If one NADH molecule completely oxidized by electron transport chain reaction in mitochondria, then it generates _____.
 A. 2 ATP B. 3 GTP
 C. 4 ATP D. 3 ATP
 - ORS stands for _____.
 - Define Biotechnology.
 - _____ : catalyze the synthesis of two molecular substrate into one molecular compound with the release of energy.
 A. Ligase B. Lyases
 C. Isomerase D. Hydrolases
 - Match the followings.

1. Vitamin D	a) Beri - Beri
2. Vitamin C	b) Pernicious anemia
3. Vitamin B ₁₂	c) Scurvy
4. Vitamin B ₁	d) Ricket

Options

- A. 1-d, 2-c, 3-b, 4-a B. 1-b, 2-c, 3-d, 4-a
 C. 1-d, 2-b, 3-a, 4-c D. 1-d, 2-b, 3-c, 4-a

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Marks

- 1. Attempt any SIX of the following:** **30**
- a) Define pharmacotherapeutics. Explain its scope and objectives.
 - b) Define congestive heart failure and explain its management.
 - c) Explain in detail about thyroid disorders and its management.
 - d) Explain stroke with its types and give the pharmacological management of stroke.
 - e) What GERD? Write about its clinical manifestations and pharmacological management.
 - f) Explain the pathophysiology and clinical manifestations of gonorrhoea and syphilis.
 - g) Discuss the pharmacological management of HIV.
- 2. Attempt any TEN of the following:** **30**
- a) Define myocardial infarction. Explain the etiopathogenesis of myocardial infarction.
 - b) What do you mean by COPD? Write about its clinical manifestations.
 - c) Give the management of migraine.
 - d) Discuss the clinical manifestations and non-pharmacological management of alcoholic liver diseases.
 - e) Write about the Causes and Symptoms of megaloblastic anaemia.
 - f) Explain the etiopathogenesis of urinary tract infection.
 - g) Explain the clinical manifestations of osteoarthritis.
 - h) Discuss the pharmacological and non-pharmacological management of psychosis.
 - i) Define conjunctivitis and explain its management.
 - j) What are the strategies for overcoming antimicrobial resistance?
 - k) What do you mean by premenstrual syndrome? Write about its etiopathogenesis.

P.T.O.

**3. Attempt the following:**

- a) Find out incorrect statement : Essential medicines list is prepared by considering -
- i) Disease prevalence
 - ii) Efficacy of medicines
 - iii) Manufacturer of medicines
 - iv) Safety of medicines
- b) Define angina.
- c) What is meant by myocardial infarction?
- d) What do you mean by emphysema?
- e) Name two bronchodilators used in asthma.
- f) Which one of these glands is not an endocrine gland?
- i) Pituitary
 - ii) Thyroid
 - iii) Pineal
 - iv) Parotid
- g) Define Parkinson's disease.
- h) Define Alzheimer's disease.
- i) Which of the medicines is an antacid?
- i) Cimetidine
 - ii) Omeprazole
 - iii) Magnesium Hydroxide
 - iv) Misoprostol
- j) Define peptic ulcer
- k) Define anemia
- l) Which cells does HIV destroy?
- m) Syphilis is caused by _____
- n) Define eczema.
- o) First line treatment for scabies is _____
- p) Auspitz sign is associated with _____
- q) Decreased levels of neurotransmitters like MAO, serotonin, noradrenaline and dopamine are believed to be the pathophysiological basis of
- i) Depression
 - ii) Alzheimer's disease
 - iii) Parkinson's disease
 - iv) Insomnia
- r) A person's belief that he/she has the power to bring people back from the dead is
- i) Hallucination
 - ii) Delusion
 - iii) Disorganised thought
 - iv) Disorganised behaviour
- s) Rotterdam criteria is used to establish the clinical diagnosis of _____
- t) Define dysmenorrhoea.
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Marks

1. **Attempt any SIX of the following:** **30**
- a) Define Medication error. Write the consequences and strategies to minimizing medication error.
 - b) Define drug information centre, Justify the need of it in hospital. Write different resources of information with example.
 - c) State the different drug distribution system to in-patient. Discuss floor stock system with its advantages and disadvantages.
 - d) Enlist daily activities of clinical pharmacist. Explain the procedure of medication history and patient counseling activity performed by the clinical pharmacist.
 - e) Explain tests associated with cardiac disorders with their significance.
 - f) Define Hospital Pharmacy. Explain professional responsibilities of the hospital pharmacist.
 - g) Define Supply Chain. Explain drug purchase procedure.
2. **Attempt any TEN of the following :** **30**
- a) Write down Mission and Elements of GPP (Good Pharmacy Practice)
 - b) Define Electronic Health Record System. Write its advantages.
 - c) Write the storage and dispensing of narcotic and psychotropic substances.
 - d) Enlist different disposal methods of drugs. Describe the disposal of controlled substances.
 - e) Define radiopharmaceuticals. Discuss the dispensing of radiopharmaceuticals.
 - f) Define TPN. Write the composition and indications in which it uses.
 - g) Enlist different inventory control techniques and explain any one.
 - h) Explain the role of pharmacist in preventing antimicrobial resistance.
 - i) Define clinical Pharmacy and write its scope.
 - j) Define PTC and write the functions of PTC.
 - k) Define Drug interactions. Write one example each of –
 - i) Drug - Drug interaction
 - ii) Drug - food interaction.

P.T.O.

**3. Attempt ALL of the following :**

- a) Select the suitable characteristics of ILR
- It has lining of ice packs
 - It maintain ideal temperature between 8 to 12 °C
 - Both i and ii
 - None of the above
- b) Write Full form of NABH.
- c) GRP stands for _____
- Good Radiation Process
 - Good Radiation Practice
 - Good Reference Process
 - Good Reference Practice.
- d) Define reserved antibiotics.
- e) Define IV admixture services.
- f) Define unit dose dispensing.
- g) Number of pharmacist required for 150 bedded hospital.
- 5
 - 8
 - 10
 - 15
- h) Define reorder level.
- i) Match the correct
- | | |
|-----------------|------------------|
| 1. Semel in die | A. At bed time |
| 2. Hora somni | B. When required |
| 3. Unus | C. Morning |
| 4. SOS | D. One |
| | E. Once a day |
- 1-E, 2-A, 3-D, 4-B
 - 1-E, 2-D, 3-C, 4-B
 - 1-E, 2-C, 3-D, 4-B
 - 1-C, 2-A, 3-D, 4-B
- j) Define pharmaceutical care.
- k) Define pharmacovigilance.
- l) Define Geriatric care
- m) Write the normal range of SGOT and SGPT.
- n) Enlist the types of poisoning.
- o) Write the normal range of blood sugar.
- p) Write the longform of FEV and FVC.
- q) Name the antidote for opium poisoning.
- r) Define antenatal care.
- s) Write the significance of increased ESR.
- t) Pharmacovigilance program of India, coordinated by the Indian pharmacopoeia Commission, is situated at
- Jaipur
 - Delhi
 - Ghaziabad
 - Mumbai

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 - (6) Answer as per latest amendment.

Marks

1. Attempt any SIX of the following:

30

- a) Write the constitution and functions of state pharmacy council.
- b) Discuss the code of ethics of pharmacist in relation to his trade as per code of ethics.
- c) Explain in detail schedule N under D&C Act 1940.
- d) What is clinical trials. Discuss in brief phases of clinical trials.
- e) Write qualifications and powers of Drug Inspector under D&C Act 1940.
- f) Give constitution and functions of Drugs Technical Advisory Board.
- g) State any two objectives of DPCO 1995. Describe the formula for calculating retail price of formulation.

2. Attempt any TEN of the following:

30

- a) Give important recommendations of Drug Enquiry Committee and its significance.
- b) Discuss the functions of Central Drug Laboratory. (Any three)
- c) Describe the labelling requirement of ophthalmic preparations under D&C Act 1940.
- d) Explain in brief provision related to import of drugs under D&C Act 1940.
- e) Write any three offences and penalties under NDPS Act 1985.
- f) Give bonafied reasons for termination of pregnancies as per MTP Act 1971.
- g) What are Good Regulatory Practices? Write documentation and licenses in community pharmacy.
- h) Define patent. Enlist various types of Intellectual Properties. (IPR)
 - i) Explain registration of clinical establishments as per act.
 - j) State the classes of Exempted Advertisements as per Drugs and Magic Remedies Act 1954.
- k) Define "Poison". Give the objectives of Poisons Act 1919 with two examples.

P.T.O.

