

Q.P. Code : **10024**

(3 Hours)

[Total Marks : 60

N.B. : (1) Figures to the right indicate full marks.

(2) All questions are compulsory.

1 Answer **any Four** of the following:

- a. Explain the following terms: 3
1) Pharmacon 2) Therapeutic Index 3) LD₅₀
- b. Explain oral route of drug administration. Mention its any two advantages.
- c. What is meant by: 3
(i) Generic name (ii) Pharmacopoeia (iii) Systematic name? 3
- d. How CNS drugs are classified on the basis of their physiological action? 3
- e. Explain the concept of hypnosis, sedation and anesthesia. 3
- f. What are drugs? Give requirements of an ideal drug. 3

2 Answer **any four** of the following:

- a. Explain the mechanism of inflammation. Mention causes of inflammation. 3
- b. Describe mechanism of histamine release. Explain its action with suitable chemical reaction. 3
- c. How cardiovascular drugs are classified on the basis of their physiological action? 3
- d. What is Insulin therapy? Give any two drawbacks of insulin therapy. 3
- e. Explain the mode of action of Barbiturates as sedatives and hypnotics. 3
- f. Give the synthesis of Levodopa from Vanillin. 3

3. Answer **any four** of the following:

- a. Give synthesis of Ciprofloxacin 3
- b. Give synthesis of Albendazole 3
- c. Give general structure of sulfonamides and explain their structure activity relationship (SAR) 3
- d. (i) Explain pathological detection of malaria during window period. 2
(ii) Write structure of cephalixin. 1
- e. Explain the terms drug absorption, distribution and excretion with respect to drug metabolism. 3
- f. Explain the following methods to increase potency of a drug. 3
(i) Homologation
(ii) Chain branching.

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4. Answer **any four** of the following:

- a. What are the types of leprosy? Give synthesis of (+) Ethambutal. 3
- b. (i) Give synthesis of 5-Fluorouracil 2
(ii) Explain the term immunodepressants. 1
- c. What are carbon nanotubes? Explain their functionalisation for pharmaceutical application. 3
- d. What are symptoms of tuberculosis? Give an account of antibiotics used for the treatment of tuberculosis. 3
- e. (i) Give synthesis of 2-amino-5-chlorobenzophenone from p-chloronitrobenzene 2
(ii) What is the role of Gold nanoparticles in the treatment of Parkinson disease? 1
- f. Give synthesis of 2, 4, 5-Triamino-6-hydroxypyrimidine from Guanidine. 3

5. Answer **any four** of the following

- a. State whether following statements are True Or False. 3
1. CNS depressants are used as stimulants.
 2. Nifedipine is a cardiovascular drug.
 3. Acetyl salicylic acid is an analgesic.
- b. Fill in the blanks choosing correct option. 3
1. Antipyretics are used in reducing body ----- in case of fever.
(temperature/pain)
 2. Bromhexine is used as a ----- agent.
(Antitussive/Mucolytic)
 3. Morphine is a ----- analgesic.
(Narcotic/Non-Narcotic)
- c. Match the columns. 3
- | A | B |
|----------------------|----------------------|
| 1. Codeine phosphate | (a) Opiates |
| 2. Atenolol | (b) Imidazoles |
| 3. Oxymetazoline | (c) β -blocker |

- d. Match the following: 3
- | A | B |
|-----------------|-------------------|
| 1.Lamivudine | (a) Imidazole |
| 2.Paludrine | (b) Pyrimidine |
| 3.Metronidazole | (c) Biguanide |
| | (d) Benzimidazole |
- e. Fill in the blanks choosing the correct option. 3
- 1) _____ nano particles possess antimicrobial activity.
(silver/iron)
 - 2) Neuretic plaque is formed in _____ disease.
(Alzhiemer/cardiovascular)
 - 3) The functional groups essential for the pharmacological activity of drug are _____
(Pharmacons/Pharmacophores)
- f. Indicate whether the following statements are true or false. 3
- 1) Amoxicilline is a β -lactum antibiotic.
 - 2) Liver is the primary site for drug metabolism.
 - 3) Amoebiasis is caused by Plasmodium.
- _____