

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: B. PHARM.
BRANCH: PHARMACY

SEMESTER: V
SESSION: MO25

SUBJECT: BP501T MEDICINAL CHEMISTRY II

TIME: 3.00 Hours

FULL MARK: 75

INSTRUCTIONS:

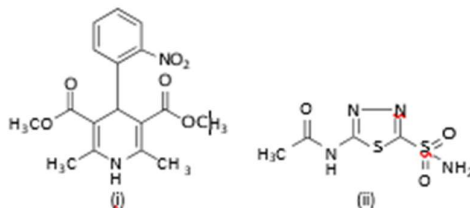
1. The missing data, if any, may be assumed suitably.
2. Before attempting the question paper, be sure that you have got the correct question paper.
3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
4. This question paper consists of (03) three parts. Read the part wise instructions before attempting the questions.

PART-I

Objective types questions (Instruction: Answer all questions)

Q1. (10x 2 = 20 Marks)

- A. An example of alkylating agents as antineoplastics is
- B. The female sexual hormones are and
- C. An example of proton pump inhibitor is
- D. Write the IUPAC nomenclature for the following drugs:



- E. Write the structure for the following IUPAC nomenclature:
 - (i) 4-chloro-2-(furan-2-ylmethylamino)-5-sulfamoylbenzoic acid
 - (ii) 2-(diethylamino)-N-(2,6-dimethylphenyl)acetamide
- F. Write the primary therapeutic uses for the following drugs: (i) Clonidine and (ii) Minoxidil
- G. Draw the action potential curve of cardiac tissue and label the different regions appropriately.
- H. Warfarin is abbreviation for
- I. Write the structure for the metabolites of tolbutamide
- J. Define local anaesthetics

PART-II
Short Answers
(Instruction: Answer seven out of nine questions)

(7 x 5 = 35 Marks)

- Q2. Write the structure of (i) Carbinoxamine (ii) Tripellenamine (iii) Cyclizine
- Q3. Explain the synthesis of (i) Mercaptopurine (ii) Methotrexate
- Q4. Elaborate the name, function and distribution of the histamine receptors in the human body
- Q5. Explain with three to five structures the use of oral contraceptives.
- Q6. Write the mode of action for any two of the following drugs with suitable schematics: (i) Chlorothiazide, (ii) Lovastatin, (iii) Gliclazide
- Q7. Write the ideal characteristics for any one of the following: (i) Oral anticoagulants, (ii) Local anaesthetics
- Q8. Discuss in detail, any one of the following: (i) Heparin preparations, (ii) Insulin preparations
- Q9. Enumerate the synthesis of the following drugs: (i) Furosemide, and (ii) Methyl dopate
- Q10. Enumerate the synthesis of the following drugs: (i) Warfarin, and (ii) Dibucaine

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PART-III
Long Answers
(Instruction: Answer two out of three questions)

(2 x 10 = 20 marks)

- Q11. Write notes on (i) Corticosteroids (ii) Thyroid and antithyroid drugs
- Q12. Discuss in detail the SAR of ACE-inhibitors with suitable examples. Provide general structure and structure of drugs cited as examples.
- Q13. Discuss in detail the SAR of sulphonyl urea derivatives used as oral hypoglycaemics with suitable examples. Provide general structure and structure of drugs cited as examples.

:::19/11/2025:::M