

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

CLASS: BPHARM
BRANCH: PHARMACY

SEMESTER: V
SESSION: MO/2019

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.

(20x1=20 Marks)

A. Fill in the blanks:-

- i Promethazine is an antihistamine having ring system
- ii is a phenylethylamine class of Ca-channel blocker
- iii Digoxin is a glycoside
- iv Testosterone is converted in to estradiol by the enzyme
- v is an antidiabetic agent act by inhibiting Glucosidase

B. State True or False

- i Cetirizine available in the market is a racemic mixture
- ii Acetazolamide is a carbonic anhydrase inhibitor
- iii Statins inhibit HMG-CoA reductase
- iv COMT is one of the enzyme metabolising progestrogens
- v Cocaine is an alkaloid having Indole nucleus

C. Match the following

- | | |
|------------------|-----------------------------------|
| A. Omeprazole | I. Platelet aggregation inhibitor |
| B. Timolol | II. PPAR modulator |
| C. Clopidogrel | III. β_1 -blocker |
| D. Prednisolone | IV. Proton pump inhibitor |
| E. Rosiglitazone | V. Anti-inflammatory steroid |

D. One line answers

- i What are antimetabolites?
- ii Define Diuretics.
- iii Write the mode of action of antiarrhythmic drug Procainamide.
- iv Write the mode of action of Sildenafil citrate
- v Give two examples for biguanide class of antidiabetic

PART-II

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

(7 x 5 = 35 Marks)

Answer any seven questions

- Q2. Classify antihistamines with suitable examples.
- Q3. Discuss the SAR of thiazide class of diuretics.
- Q4. Elaborate on the synthesis and mode of action of Furosemide.
- Q5. Give an account of Heparin preparation.
- Q6. Elaborate on the synthesis and mode of action of Warfarin.
- Q7. Give an account of Hormone Replacement Therapy (HRT).
- Q8. Discuss in detail the SAR of estrogens.
- Q9. Discuss in detail the SAR of sulphonyl urea class of antidiabetics.
- Q10. Elaborate on the synthesis and mode of action of Dibucaine.

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

(2 x 10 = 20 marks)

Answer any two questions

- Q11. Define and classify anticancer drugs with suitable example for each class. Write the structure of one drug from each class.
- Q12. Elaborate on chemistry, nomenclature and mode of action for the following drugs: (a) Nitroglycerine, (b) Nifedipine, (c) Ethacrynic acid & (d) Captopril
- Q13. Elaborate on the chemistry, nomenclature and mode of action for the following drugs: (a) Diethylstilbesterol, (b) Mifepristone, (c) Betamethasone & (d) Methimazole

:::25/11/2019:::M