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ST—457—2022

FACULTY OF SCIENCE

M.Sc. (Second Year) (Fourth Semester) EXAMINATION

MAY/JUNE, 2022

(CBCS Pattern)

ORGANIC CHEMISTRY

Paper-XXIII (CH-544/2A)

(Medicinal Chemistry)

(Wednesday, 6-7-2022)

Time : 2.00 p.m. to 5.45 p.m.

Time— 3.45 Hours

Maximum Marks—75

N.B. :— (i) Attempt all questions.

(ii) Figures to the right indicate full marks.

1. Attempt any *three* of the following : 15
 - (a) How are drugs used for testing kidney function ?
 - (b) Explain the SAR of methyl salicylate and phenyl butazone.
 - (c) Explain life cycle of Plasmodia.
 - (d) Give synthesis and SAR of methadone.
 - (e) Discuss the role of alkylating agents and antimetabolites in the treatment of cancer.

2. Attempt any *three* of the following : 15
 - (a) What are sweetening agents ? Discuss use of saccharine and *p*-phenyl urea as sweetening agents.
 - (b) How is gastric hyperacidity treated ?
 - (c) Discuss recent developments in the treatment of AIDS.
 - (d) Give synthesis of pamaquine and pyrimethamine.
 - (e) Explain the use of stovaine and its analogues as local anaesthetics.

3. (a) What are Antihypertensive drugs ? How are they classified ? Give the synthesis of methyldopa and clonidine. 8

P.T.O.

Or

Offer the synthesis of Allopurinol, Fluconazol, Mepridine and Ibuprofen.

- (b) What are Antimalarials ? How are they classified ? Discuss chemotherapy of malaria. 7

Or

Give synthesis of :

- (i) Imipramine &
(ii) Spiro periodol.

Discuss the SAR of Butyrophenones.

4. (a) What are Antianginal Drugs ? How are they classified ? Give their mechanism of action. 8

Or

Discuss SAR of promazine and dibenzapine derivatives.

- (b) Explain SAR of methyl salicylate, phenyl butazone and aspirin. 7

Or

Explain the : (i) Carcinogenic compounds

(ii) Azedothymidine (AZT) derivatives.

5. (a) Choose the correct alternative : 5

(i) Biologically active form of insulin is :

- (a) monomer (b) dimer
(c) trimer (d) polymer

(ii) Retrovirus consists of :

- (a) RNA (b) DNA
(c) PABA (d) None of these

(iii)cells are suitable host cells for attack by HIV virus.

- (a) T₁ (b) T₂
(c) T₃ (d) T₄

(iv) Disorder in the rhythm and normal heart beat rate is called :

- (a) Anxiety
- (b) Ischemia
- (c) Arrhythmia
- (d) Dismonia

(v)derivatives are used to observe the location of tumors.

- (a) Hematoporphyrin
- (b) Quinoline
- (c) Pyridine
- (d) Uranium

(b) Write short notes on (any two) :

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- (i) CNS stimulants
- (ii) Nitrogen mustards
- (iii) Publication examination of patent application.