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**WT—319—2024**

**FACULTY OF SCIENCE**

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

**NOVEMBER/DECEMBER, 2024**

**(CBCS Pattern)**

**ORGANIC CHEMISTRY**

**Paper XXIII (OCH-524)**

**(Medicinal Chemistry)**

**(Wednesday, 18-12-2024)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time—Three Hours*

*Maximum Marks—75*

*Note :—* (i) Attempt *all* questions.

(ii) Figures to the right indicate full marks.

1. Solve any *three* of the following : 15
- (a) Explain structure activity of 1, 4-dihydropyridines as calcium channel blockers.
  - (b) Give synthesis and structure activity of Malphalan
  - (c) Explain the drugs used to test kidney functions.
  - (d) Discuss SAR of 4-amino quinoline derivatives.
  - (e) Give synthesis and SAR of 6, 7-benzomorphans.

P.T.O.

2. Attempt any *three* of the following : 15

- (a) What are antimalarial drugs ? Explain life cycle of plasmodia.
- (b) Give structure and activity of cardiac glycosides.
- (c) Discuss surgery and radiation therapy for treatment of cancer.
- (d) Discuss SAR of promazine derivatives.
- (e) Explain application for patents.

3. (a) Give synthesis and structure activity of procainamide and methyldopa. 8

*Or*

Discuss SAR of methyl salicylate and Aspirin. Give synthesis and uses of Allopurinol.

(b) How will you prepare primaquine ? Discuss chemotherapy of malaria. 7

*Or*

Discuss SAR of Butyrophenone derivatives. Give synthesis of Haloperidol.

4. (a) What are  $\beta$ -adrenergic blocking agents ? Give synthesis and SAR of propranolol and papavarine. 8

*Or*

Discuss synthesis and SAR of Stovaine and Hydantoins.

(b) Explain structure and life cycle of the AIDS virus. 7

*Or*

Discuss SAR of sulphones as sedatives and hypnotics. Give synthesis of amitriptyline.

5. (a) Discuss in brief about the manual of patent practices and procedures. 5
- (b) Write short notes on any *two* : 10
- (a) Ulcerative colitis
- (b) Synthesis and structure activity of 6-mercaptopurine
- (c) Synthesis and structure activity of pentothal sodium.