

B04-402 (B)

Fourth Semester Online Examination, May-June, 2022

M. Sc. CHEMISTRY**Paper - IV (Elective - B)****MEDICINAL CHEMISTRY**

Time : Three Hours]

[Maximum Marks : 80

Note : (i) Part A and B of each question in each Unit consist of very short answer type questions which are to be answered in one or two sentences.

(ii) Part C (Short answer type) (Word limit 200-250) and Part D (Long answer type) of each question should be answered within the word limit (400-450 words) mentioned.

UNIT-I

1. (A) What is the difference between adverse effect and site effect of a drug. 2
- (B) How the ability of chemist affects the development of new drugs. 2

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- (C) Define receptors and its two important characteristics. 4

Or

Discuss Bioavailability.

- (D) Describe the factors affecting the absorption of drugs. 12

Or

How specific structural groups or unit are responsible for physiological activity of drug ? Discuss with suitable example. (only six groups)

UNIT-II

2. (A) Define stimulation action of drug with example. 2
- (B) How drug metabolising enzymes are classified ? 2
- (C) What are inhalational anesthetic drugs ? Explain with any two examples. 4

Or

Write biochemical effect and mechanism of action, chemical structure of Barbituric acids its any two derivatives.

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(D) Explain inhibition of enzyme by drugs. 12

Or

Give synthesis and uses of the following drugs :

- (i) Alprazolam
- (ii) Thiopental sodium
- (iii) Trimethadine.

UNIT-III

3. (A) Define anti infective drugs with suitable example. 2
- (B) How thrombosis can be caused ? 2
- (C) What are Sulfonamide ? Give their mode of action. Give synthesis of any *one* sulfonamide drug also. 4

Or

Write note on cardiac failure.

- (D) Discuss uses and synthesis of any *three* following drugs : 12
- (i) Quinidine (ii) Verapamil
 - (iii) Methyl dopa (iv) Diltiazam
 - (v) Amyl nitrate.

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Or

Give synthesis of the following (any *three*) :

- (i) Mepacrine (ii) Primaquine
- (iii) Paludrine (iv) Pamaquine
- (v) Isopentaquine.

UNIT-IV

4. (A) Draw the chemical structure of any *four* penicillin and name it. 2
- (B) Define chemotherapy, classify chemotherapy with example in short. 2
- (C) Give synthesis uses, adverse effect of any *one* semi-synthetic penicillin. 4

Or

What are the external causes of cancer ? Explain with any *two* examples.

- (D) Explain biosynthesis of polysaccharide in plants. 12

Or

Explain role of alkylating agents and antimetabolites in treatment of cancer. Give synthesis and uses of melphalan and uracil.

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