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**AG—285—2018**

**FACULTY OF SCIENCE**

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

**NOVEMBER/DECEMBER, 2018**

**(CBCS Pattern)**

**ORGANIC CHEMISTRY**

**Paper XXIII (CH-544/2A)**

**(Medicinal Chemistry)**

**(Tuesday, 4-12-2018)**

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

*Time—3 Hours*

*Maximum Marks—75*

*N.B. :— (i) Attempt All questions.*

*(ii) Figures to the right indicate full marks.*

1. Solve any *three* of the following : 15
  - (a) How are drugs used for testing kidney function ?
  - (b) Give SAR and mechanism of action of Biguanides.
  - (c) Discuss about life-cycle of Plasmodia.
  - (d) Give synthesis and SAR of methadone.
  - (e) How are immunology and radiation therapy used for the treatment of cancer ?
  
2. Attempt any *three* of the following : 15
  - (a) How is gastric hyperacidity treated ?
  - (b) Offer synthesis and SAR of methohexal and pentothal sodium.
  - (c) How are hormones and natural products used for the treatment of cancer ?
  - (d) Give SAR of 4-amino quinoline derivatives.
  - (e) Discuss structure and activity of cardiac glucosides.

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

*Or*

What are anti-inflammatory drugs ? How are they classified ? Give SAR of mefenamic acid and indomethacine.

- (b) Give synthesis of the following antimalarial drugs : 7

(i) Chloroquine Phosphate

(ii) Pyrimethamine

(iii) Santoquine.

*Or*

Give synthesis of :

(i) Imipramine

(ii) Spiroperidol.

Discuss SAR of Butyrophenones.

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

*Or*

Discuss SAR of promazine and dibenzepine derivatives.

- (b) Discuss SAR of methyl salicylate, phenyl butazone and Aspirin. 7

*Or*

Explain :

(i) Carcinogenic organic compounds

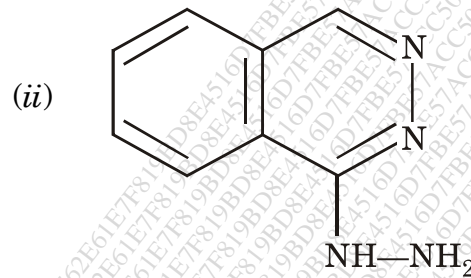
(ii) Azedothymidine derivatives.

5. (A) Select the *correct* alternative in the following multiple choice questions :

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

- (a) T<sub>1</sub>
- (b) T<sub>2</sub>
- (c) T<sub>3</sub>
- (d) T<sub>4</sub>



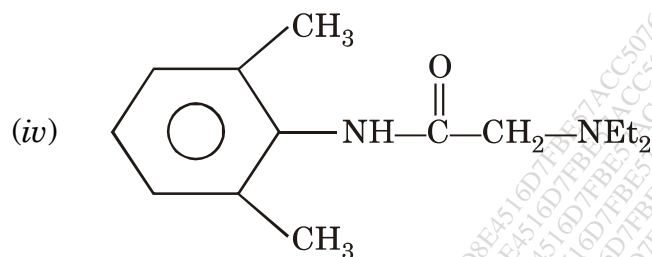
is the drug used as :

- (a) Antigout
- (b) Antihypertensive
- (c) Analgesic
- (d) Antileprotic

(iii) Drugs used for Erythrocytic phase of malarial parasite are called as :

- (a) Prophylactic agents
- (b) Schizontocidal
- (c) Gametocitocidal
- (d) Gametocidal

P.T.O.



is the drug used as :

- (a) General anaesthetic
  - (b) Local anaesthetic
  - (c) Analgesic
  - (d) Antiglout
- (v) Disorder in the rhythm and normal heart beat rate is called as :
- (a) Anxiety
  - (b) Ischemia
  - (c) Arrhythmia
  - (d) Disomnia

(B) Write short notes on any *two* of the following :

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- (a) CNS stimulants
- (b) Patentable subject matter
- (c) Use of Alkylating agents for the treatment of cancer.