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**L—240—2019**

**FACULTY OF SCIENCE**

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

**MARCH/APRIL, 2019**

**(CBCS Pattern)**

**ORGANIC CHEMISTRY**

**Paper XVIII (CH-534/2A)**

**(Medicinal Chemistry–I)**

**(Monday, 29-4-2019)**

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

*Time—Three Hours*

*Maximum Marks—75*

*N.B. :— (i) Attempt All questions.*

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

1. Solve any *three* of the following : 15

- (a) How do antibiotics act for inhibition cell wall synthesis ?
- (b) Discuss about rate theory of drug activity.
- (c) Write a note on mechanism of blood clotting.
- (d) Give synthesis and SAR of Isonazid.
- (e) Explain hydrolysis reaction involved in metabolism of drugs.

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

- (a) Explain suicide enzyme inactivation for design of enzyme inhibitor.

P.T.O.

- (b) What are coagulants and anticoagulants ? Give the action of anticoagulant.
- (c) Discuss biological defences involved in mechanism of chemotherapeutic action.
- (d) What are prodrugs ? How are they classified ?
- (e) Discuss structure and activity of Thioacetazone.
3. (a) Discuss disposition of drugs with respect to Pharmacokinetics. 8

*Or*

Discuss physico-chemical properties—lipophilicity, electronic parameter and steric substituent constants used in QSAR studies.

- (b) Explain structure and activity of streptomycin, viomycin, chaulmoogra and hydnocarpous oil. 7
- Or*
- Discuss the mode of action of penicillin and chloramphenicol.
4. (a) What is lead compound ? Discuss lead modification in drug design and development. 8

*Or*

Write notes on :

- (i) Sulphonamide
- (ii) Action of CNS disorder.
- (b) Write a note on semisynthetic penicillin and cephalosporin. 7

*Or*

Discuss the uses of molecular modelling.

5. (A) Select the *correct* alternative from the following : 5

(i) ..... nucleus is present in Ethionamide.

- (a) Furan
- (b) Indole
- (c) Pyridine
- (d) Quinoline

(ii) IUPAC name of  is .....

- (a) 1, 4 oxthiazine
- (b) 1, 4 azoxazine
- (c) 1, 4 thiazine
- (d) 1, 4 oxazine

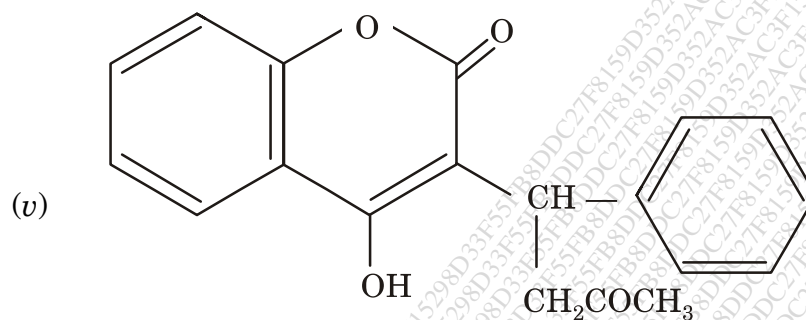
(iii) The structure of tetracycline has ..... membered nucleus.

- (a) 4
- (b) 3
- (c) 2
- (d) 1

(iv) In drug metabolism, ketones are reduced to .....

- (a) Primary alcohol
- (b) Secondary alcohol
- (c) Tertiary alcohol
- (d) Benzyl alcohol

P.T.O.



is the structure of .....

- (a) Warfarin
- (b) Dicoumarol
- (c) Cephalosporin
- (d) Knellin

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

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- (i) Immunological assay
- (ii) Metabolic antagonism
- (iii) Structure activity of coumarin derivatives.