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AG—240—2018

FACULTY OF SCIENCE

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

NOVEMBER/DECEMBER, 2018

(CBCS Pattern)

ORGANIC CHEMISTRY

Paper-XVIII (CH-534/2A)

(Medicinal Chemistry-I)

(Monday, 3-12-2018)

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) Discuss induced theory of drug activity.
 - (b) Explain about conjugation reaction involved in drug metabolism.
 - (c) Discuss the action of anticoagulants.
 - (d) Explain disorganization of cytoplasmic membrane as the mechanism of action of antibiotics.
 - (e) Offer synthesis of cycloserine.
2. Attempt any *three* of the following : 15
 - (a) Explain the terms :
 - (i) Pharmacophor
 - (ii) Toxicology.
 - (b) Write a note on prodrugs and drug delivery system.
 - (c) How will you determine the structure of protein ?

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- (d) What are anticoagulants ? How will you synthesis 4-hydroxy coumarin ?
- (e) Discuss structure and activity of ethionamide.
3. (a) Discuss about distribution and elimination of drugs with respect to pharmacokinetics. 8

Or

Discuss about competitive inhibitors and active site directed irreversible inhibition of enzymes.

- (b) How will you synthesis acedapsone ? Explain multidrug therapy for treatment of leprosy. 7

Or

How will you synthesis chlortetracycline ? Give structure activity of tetracyclin.

4. (a) Discuss Homologation, chain branching, ring chain transformation and bio-isosterism used in structure modification of drugs to increase potency and therapeutic index. 8

Or

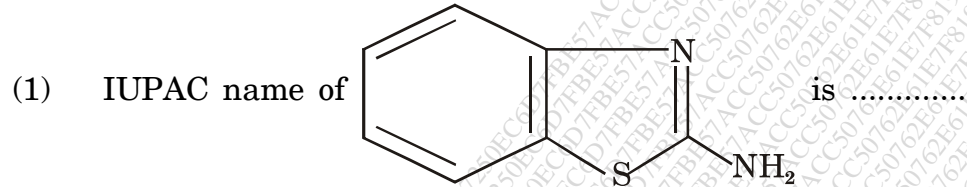
Discuss action of CNS disorder and cardiac dysfunction.

- (b) Explain : 7
- (i) Free Wilson method in QSAR studies
- (ii) Experimental determination of partition coefficient.

Or

Offer synthesis of penicillin V, penicillin G, Amoxicillin and Ampicillin from 6 APA.

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



- (a) 2-amino thiazole
 (b) 5-amino benzoxazole
 (c) 3-amino benzthiazole
 (d) 2-amino 1, 3 benzthiazole

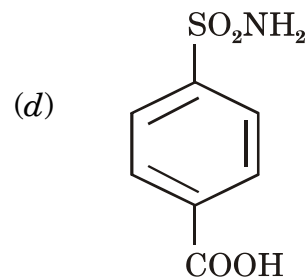
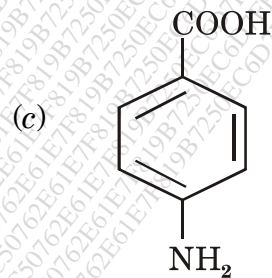
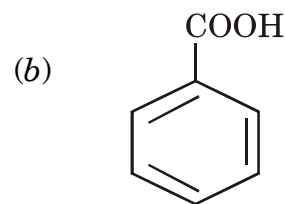
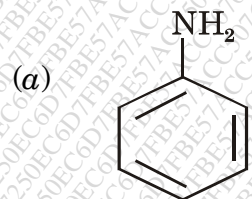
- (2) drug is aliphatic diamine.

- (a) Ethambutol
 (b) Isoniazid
 (c) Rifampicin
 (d) Viomycin

- (3) antibiotic is optically active.

- (a) Ampicillin
 (b) Streptomycin
 (c) Chloramphenicol
 (d) All of the above

- (4) Sulphonamides are structural analogues of



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- (5) In drug metabolism, oxidation at saturated carbon atoms gives
- (a) Esters
 - (b) Carboxylic acids
 - (c) Amines
 - (d) Cyanides
- (B) Write short notes on (any *two*) : 10
- (a) Soft drugs
 - (b) Biological defences
 - (c) Vitamin K analogues.