

Seat No. : _____

ND-139

December-2015

M.Sc., Sem.-III

**502 : Chemistry (Organic)
(Medicinal Chemistry)**

Time : 3 Hours]

[Max. Marks : 70

Instructions : (1) **All** questions carry equal marks.

(2) Figures to the right indicate full marks of the questions.

1. (a) Give structural variations, mode of action and SAR of Penicillin. **7**

OR

Give structural variations and SAR of Tetracyclins.

(b) Answer the following : **7**

(1) Give a brief account of third generation Cephalosporins.

(2) Define antibiotics. Classify antibiotics on the basis of chemical structure.

OR

Give synthesis and uses of any **two** :

(1) Chloramphenicol

(2) Ampicillin

(3) Cephalosporin

2. (a) Answer the followings : **7**

(1) What are local and general anesthetics ? Give structural variations in local anesthetics.

(2) Give synthesis and uses of Alprazolam.

OR

Answer the followings :

(1) What are antipsychotics ? Classify them giving one example of each class.

(2) Give synthesis and uses of Nikethamide.

- (b) Answer the followings : 7
(1) What are hypnotics and sedatives ? Classify them.
(2) Give structural variations in barbiturates with synthesis of Amobarbital.

OR

Answer the followings :

- (1) What are antidepressants ? Classify them giving one example of each class.
(2) Discuss mode of action and SAR of Novalgine.

3. (a) Answer the followings : 7
(1) Discuss structural variations and SAR of 8-aminoquinolines as antimalarials.
(2) Give synthesis and uses of Primaquine.

OR

Answer the followings :

- (1) Give classification and modern chemotherapy of antimalarials.
(2) Give synthesis and uses of Mepacrine.

- (b) Write a note on antimycobacterial agents giving synthesis of INH. 7

OR

Give synthesis and uses of :

- (1) Ethanamide
(2) Ethambutol
(3) Dapson

4. (a) Answer the following : 7
(1) What are diuretics ? Classify them according to their therapeutic use with one example of each class.
(2) Give synthesis and uses Acetazolamide.

OR

Answer the following :

- (1) Give a brief account of antihypertensive agents.
(2) Give synthesis and uses of Ethacrynic acid.

- (b) Answer the following : 7
(1) Discuss structural variations in sulphonylureas.
(2) Give synthesis and uses of Methyl dopa.

OR

Give synthesis and uses of

- (1) Chlorothiazide
(2) Glibenclamide
(3) Atenolol

5. Short questions :

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Define :

- (1) Bacteriostatic and bacteriocidal
- (2) *in vivo invitro*
- (3) Prophylaxis
- (4) Acid fact bacilli
- (5) Gram staining method
- (6) Beta blockers
- (7) Give name and structure of any two general anesthetics
- (8) Role of insulin
- (9) Why combination therapy is used for tuberculosis and leprosy infections ?
- (10) Give names of plasmodium parasite.
- (11) Name any two monoamine oxidase inhibitors with their uses.

Give structure and use of :

- (12) Diltiazim
 - (13) Artemisinin
 - (14) Give name and structure of miscellaneous antibiotic.
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