

Seat No. : _____

NK-120

November-2013

M.Sc. (Sem. III)

CHE (O) 502 : Organic Chemistry

(Medicinal Chemistry)

Time : 3 Hours]

[Max. Marks : 70

Instructions : (1) All questions carry equal marks.
(2) Figures to the right indicate full marks of that question.

1. (A) (1) Define antibiotics. Discuss SAR of Penicillins. 7
(2) What are non-lactam antibiotics ? Discuss structural variations among tetracyclines.
- (B) (1) What are broad and narrow spectrum antibiotics ? Discuss third generation of cephalosporins.
(2) Give synthesis and uses of Ampicillin. 7
- OR**
- (A) (1) How are antibiotics classified on the basis of their chemical structures ?
Classify penicillins. 7
(2) Give synthesis and uses of Chloramphenicol.
- (B) (1) Discuss SAR of tetracyclines. 7
(2) What are cardinal requirements for a compound to be an antibiotic ? Give name and structure of any two unclassified antibiotics.
2. (A) (1) Give classification and structural variations in local anaesthetics. 7
(2) Discuss intravenous general anaesthetics. Give synthesis and use of chloroazepam.
- (B) (1) What are anti-depressants ? Classify them giving one example of each class. 7
(2) Give synthesis and uses of lidocaine and dibucaine.
- OR**
- (A) (1) What are neuroleptics ? Classify them giving one example of each class. 7
(2) Give synthesis and uses of nethamphetamine.
- (B) (1) What are hypnotics and sedatives ? Classify them. 7
(2) Give structural variations in barbiturates with synthesis of any two barbiturates.
3. (A) (1) What are antimalarials ? Discuss SAR of antimalarials. 7
(2) Give synthesis and uses of primaquine.
- (B) (1) Why is combination therapy used to treat tuberculosis and leprosy ? Give synthesis and use of DDS and INA. 7
(2) Discuss the mode of action of antimalarials.

OR

- (A) (1) Discuss modern chemotherapy of Malaria. Discuss structural variations in 4-aminoquinolines as antimalarials. 7
 (2) Give synthesis and uses of any one 9-aminoacridine derivative.
- (B) (1) Classify antituberculosis and antileprocy agents giving suitable example of each class. 7
 (2) Give synthesis and uses of ethambutol.
4. (A) (1) Define and classify cardiovascular drugs giving suitable example of each class. 7
 (2) Give synthesis and uses of glibenclamide.
- (B) (1) Discuss structural variations in sulphonyl ureas. 7
 (2) Give synthesis and uses of chlorthiazide.
- OR**
- (A) (1) What are diuretics ? Classify them according to their therapeutic uses with one example of each class. 7
 (2) Give synthesis and uses of atenolol.
- (B) (1) What is hypoglycemia ? Discuss the importance of insulin. 7
 (2) Give synthesis and uses of acetazolamide.
5. Short questions. 14
 Define :
- (1) Invivo invitro
 - (2) Medicinal chemistry
 - (3) Bacteriostatic and bacteriocidal
 - (4) Pharmacophore
 - (5) Acid fast bacilli
 - (6) Toxicity
- Give structure and use of :
- (7) Glutethimide
 - (8) Ethanamide
 - (9) Quinine
 - (10) Bacitracin
 - (11) Name two diseases caused by mycoacteria
 - (12) What is Gram staining method ?
 - (13) State difference between local and general anaesthetics
 - (14) Name the parasite causing malaria.
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