

**AS-429**

**M.Sc. (Chemistry) IV Semester  
(Reg./ATKT) Examination June 2019**  
**MEDICINAL CHEMISTRY**

Optional (any two)

Paper - IV (E)

*Time Allowed : Three Hours]*

*[Maximum Marks : 85]*

Note : Attempt all questions.

**Section - A**  
**Objective Type Questions**

$$15 \times 1 = 15$$

Q.I. Choose the correct answer.

- i) A good lead compound in drug discovery will.
- (a) Be strongly polar or lipophilic
  - (b) Have structurally related analogues
  - (c) Inhibit the required biological activity
  - (d) Interact irreversibly with its target

ii) Combinatorial chemistry generates libraries of.

- (a) Large inorganic molecules
- (b) Large organic molecules
- (c) Small inorganic molecules
- (d) Small organic molecules

iii) Bio assays.

- (a) Are the main methods used in high through put screening
- (b) Measure a functional response in a biological tissue.
- (c) Measure the binding affinity of an agonist.
- (d) Require the use of radiolabelled ligands

iv) The main enzyme responsible for activation of xenobiotics.

- (a) Cytochrome p - 450
- (b) Glutathione - S transferase
- (c) NADPH cytochrome p - 450 reductase
- (d) Glucuronyl transferase

(3)

- v) Primary site of drug metabolism is  
(a) Stomach (b) Intestine  
(c) Liver (d) Muscles

vi) Sulphonamides are  
(a) Anti fungal (b) Anti viral  
(c) Anti bacterial (d) Anti allergic

vii) B. Lactum Antibiotics are  
(a) Penicillin  
(b) Cephalosporins  
(c) Both (a) and (b)  
(d) None of these

viii) What are broad spectrum antibiotics  
(a) Drugs effective against both viral  
bacterial cells.  
(b) Drugs effective against all gram  
bacterial cells.  
(c) Drugs effective against most of bac  
cells (both gram +V & gram - ve)  
(d) All of the above

ix) A 30 years old pregnant woman dev  
Tuberculosis which of the following  
should not be used.  
(a) INH (b) Rifampicin  
(c) Streptomycin (d) Ethambutol

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x) Acyclovir is  
(a) Antiviral drug  
(b) Contain 3,'O' in structure  
(c) Contain 5,'N' in structure  
(d) All of the above

xi) Malaria is caused due to  
(a) Plasmodium falciparum  
(b) Plasmodium malaria  
(c) Plasmodium vivax  
(d) All of these

xii) Mefloquine is used as  
(a) Anti fungal <http://www.on>  
(b) Antimalarial  
~~(c)~~ Anti asthmatic  
(d) Anti viral

xiii) Diclofenac sodium is an example of  
(a) Antihistaminic  
(b) Steroidal analgesic  
(c) Non steroidal analgesic  
(d) All of these

*Contd...*

(5)

xiv) Biochemical responsible for allergic reaction.

- (a) Heparin
- (b) Histamine
- (c) Both (a) and (b)
- (d) Adrenaline

xv) Salbutamol is a

- (a) antiasthmatic agent
- (b) anti malarial agent
- (c) anti allergic agent
- (d) anti viral agent

### Section - B

#### Short Answer Type Questions

$$5 \times 5 = 25$$

Q.2. Explain approaches to Drug Design.

OR

Factors affecting Bio-activity of drug.

Q.3. Write short notes on any two of the following.

- i) Enzyme inhibition
- ii) Membrane Active Drugs
- iii) Sulfonamides

(6)

Q.4. Write short notes the following (any two)

- i) Synthesis of penicillin V
- ii) Actinomycin - D
- iii) Synthesis and uses of chloramphenicol

Q.5. Explain antimalarial Drugs with suitable example.

OR

Synthesis and uses of ciprofloxacin.

Q.6. Write short note on the following (any two)

- i) Nefopam
- ii) Diclofenac sodium
- iii) Ibuprofen

### Section - C

#### Long Answer Type Questions

$$5 \times 9 = 45$$

Q.7. Describe relationship between free Wilson analysis and Hansch analysis.

OR

Explain relationship between chemical structure and biological activity.

(7)

**Q.8.** What do you mean by pharmacokinetics explain pharmacokinetic?

OR

Describe significance of drug metabolism in medicinal chemistry.

**Q.9.** Describe mode of the action of antibiotics.

OR

Describe synthesis, uses and side effect of Tetracycline.

**Q.10.** Describe chemotherapy of malaria.

OR

Explain anti fungal Drugs with examples.

**Q.11.** Describe various agents of Anti asthmatic OR antihistaminic drugs.



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