

M.Sc. 3rd Semester Examination, 2018

**CHEMISTRY**

PAPER – CEM-304

*Full Marks : 40*

*Time : 2 hours*

Answer questions from each Group

*The figures in the right hand margin indicate marks*

**GROUP—A**

Answer any *four* questions : 2 × 4

1. Choose the *correct* answer :
  - (i) Nitroglycerine is administrated in the body by the process
    - (a) Oral way

( Turn Over )

- (b) Sublingual route
- (c) Intravenous route
- (d) Pulmonary Route

(ii) Salbutamol is used for the treatment of

- (a) Bradycardia
- (b) Heart block
- (c) Cardiac stimulating
- (d) Asthma

(iii) Renitidine acts as a blocker of the production of

- (a)  $H_2SO_4$  in stomach
- (b) HCl in stomach
- (c)  $NH_3$  in Stomach
- (d)  $CH_3COOH$  in stomach

(iv) Paracetamol is used as

- (a) Analgesic and anti-pyretic agent
- (b) Anti biotic agents

- (c) Antileishmanial agents
- (d) Antiviral agents
- (v) Aspirin is used for the treatment of
  - (a) Inflammation and infection
  - (b) Blood clots
  - (c) Arrhythmias
  - (d) Coronary artery disease
- (vi) Amoxicillin is
  - (a) An antibiotic drug
  - (b) An antipyretic drug
  - (c) An antileishmanial drug
  - (d) An antiviral drug
- (vii) Chloroquine is
  - (a) An antibiotic drug
  - (b) An antimalarial drug
  - (c) Antileishmanial drug
  - (d) Antiviral drug

(viii) Captopril is used for the treatment of

- (a) Hypertension
- (b) Hyper acidity
- (c) Anxiety
- (d) Hypersensitivity.

GROUP-B

Answer any *four* questions : 4 × 4

2. "Different type of drug required for different type of receptor". Explain with suitable example. 4
3. Draw the structure of ranitidine and explain how it acts as blocker for the treatment of acidity in stomach. 4
4. Explain the mechanism of catalytic receptor with a suitable example. 4
5. How the pharmacokinetics of drug can be studied? Explain. 4

( 5 )

6. What do you mean by antiparkinsonian drugs ?  
Classify them with proper examples. 4
7. Write the use and synthetic steps of amantadine  
and trihexyphenidyl. 4
8. How do you explain the action of general  
anesthetics with proper mechanism ? 4
9. Write down the synthetic steps and use of  
thiopental. 4

GROUP-C

Answer any *two* questions : 8 × 2

10. (a) Classify local anesthetics according to their  
clinical use with proper examples.
- (b) Define opioid analgesics. Write down the  
mode of action of this drug. 4 + 4
11. (a) What do you mean by Insomnia ? What drugs  
are used to treat Insomnia ?

- (b) Write down the synthetic steps involved in the synthesis of chlorprocaine. 4 + 4
12. (a) "Drug administration is an essential process in human body". Explain.
- (b) Discuss about the way of drug administration with suitable example. 4 + 4
13. (a) Discuss about macromolecules which acts as a receptor with suitable example.
- (b) How prostaglandin synthase can be blocked? Give the mechanism of this inhibition. 4 + 4
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