

**SECOND PROFESSIONAL M.B.B.S. DEGREE EXAMINATION, MAY 2008****PHARMACOLOGY—Paper I**

Time : Two Hours

Maximum : 40 Marks

*Answer all the questions.**Answer sections A and B in separate answer books.**MCQs should be answered first in the response sheet provided.***Section A**

- I. Multiple Choice Questions. Single response type 8 (separate sheet attached). ( $8 \times \frac{1}{2} = 4$  marks)
- II. Match the following. Single response type 8 (separate sheet attached) ( $8 \times \frac{1}{2} = 4$  marks)
- III. In the schematic diagram of a cholinergic nerve terminal show the site of action of Tubocurarine. ( $1\frac{1}{2} + \frac{1}{2} = 2$  marks)
- IV. Give the pharmacological basis for the use of the following :—
- (a) Disulfiram in chronic alcoholism.
  - (b) Atropine in organophosphorus poisoning.
  - (c) Aspirin in post myocardial infarction patients.
  - (d) Furosemide in pulmonary edema.
- (  $4 \times 1 = 4$  marks)
- V. Write briefly on :
- (a) Microsomal enzyme induction.
  - (b) Losartan.
  - (c) Uses of diazepam.

(  $3 \times 2 = 6$  marks)

**Section B**

- VI. Mr. Raju, a 55-year old businessman is a known hypertensive (BP of 180/110 mm of Hg) on hydrochlorothiazide 25 mg + triamterene 2.5 mg daily since 8 months. On his monthly visit for check-up his BP is found to be 160/100 and blood test shows an elevated fasting glucose of 160 mg/dl.
- 1 What could be considered as one of the causes for his raised blood sugar ?
  - 2 Which are the antihypertensive that can be used in this patient ?
  - 3 Why is triamterene combined with hydrochlorothiazide ?
  - 4 Name two drug combinations that can be used in moderate to severe hypertension.
  - 5 Outline the treatment of hypertensive crisis.

(  $2 + 2 + 1 + 1 + 2 = 8$  marks)

VII. Give an indication for the following drug combination and explain the pharmacological basis :

- 1 Physostigmine + Pilicarpine.
- 2 Fentanyl + lignocaine.
- 3 Adrenaline + lignocaine.
- 4 Levodopa + carbidopa.

(4 × 1½ = 6 marks)

VIII. Write short notes on :

- 1 Heparin.
- 2 Valproic acid.
- 3 Pentazocine.
- 4 Atenolol.

(3 × 2 = 6 marks)

## PHARMACOLOGY—Paper I

## I. MULTIPLE CHOICE QUESTIONS

Note.—(1) Do not write anything on the question paper.

(2) Write your register number in the answer-sheet provided.

(3) Select one most appropriate response and encircle the corresponding alphabet against each question number in the answer-sheet provided.

1. Tolerance can develop to all actions of opioids **except** :  
(A) Miosis and antitussive effect. (B) Constipation and analgesia.  
(C) Miosis and respiratory depression. (D) Constipation and miosis.
2. "Rabbit syndrome" is an adverse effect of the following drug.  
(A) Trazodone. (B) Chlorpromazine  
(C) Bupropion (D) Doxepin.
3. The duration of action of a drug is dependent on its :  
(A) Plasma and tissue binding. (B) Metabolism.  
(C) Tubular filtration and secretion. (D) All the above.
4. Terbutaline acts on these receptors to relax bronchial smooth muscles.  
(A)  $\alpha_1$  adrenoceptors. (B)  $\beta_1$  - adrenoceptors.  
(C)  $\alpha_2$  - adrenoceptors. (D)  $\beta_2$  - adrenoceptors.
5. All the following are cholinomimetic alkaloids except one which is a choline ester.  
(A) Pilocarpine. (B) Carbachol.  
(C) Muscarine. (D) Arecoline.
6. Which one of the following diuretics is not related to thiazide diuretics  
(A) Hydrochlorothiazide. (B) Metolazone.  
(C) Chlorthalidone. (D) Piretanide.
7. The pungent odour of the following anaesthetic can induce coughing :  
(A) Sevoflurane. (B) Halothane.  
(C) Isoflurane. (D) Desflurane.
8. Which of the following drugs reduces the symptoms but does not alleviate the underlying disease process of rheumatoid arthritis ?  
(A) Ibuprofen. (B) Auranofin.  
(C) Penicillamine. (D) Sulphasalazine.

PHARMACOLOGY—Paper I

II. Match the following :—

Receptors and their ligands :

- |                     |                 |
|---------------------|-----------------|
| A 1 NMDA.           | (a) Baclofen.   |
| 2 GABA <sub>B</sub> | (b) Ketamine.   |
| 3 $\mu$ (mu)        | (c) Diazepam.   |
| 4 GABA <sub>A</sub> | (d) Naltrexone. |
|                     | (e) Atenolol.   |

Antiparkinsonian agent with its specific mode of action :

- |                   |                          |
|-------------------|--------------------------|
| B 1 Amantadine.   | (a) COMT inhibitor.      |
| 2 Tolcapone.      | (b) DA agonist.          |
| 3 Trihexyphenidyl | (c) Increase DA release. |
| 4 Lisuride.       | (d) Anticholinergic.     |
|                   | (e) DA precursor.        |

(8 × ½ = 4 marks)