Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.Pharm/SEM-8/PT-809A/2010

2010
ADVANCED PHARMACOLOGY

Time Allotted : 3 Hours | Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A
(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : $10 \times 1 = 10$

   i) All the following ACE-inhibitors are prodrugs *except*

   a) Ramipril b) Captoril

   c) Risinopril d) Enalopril.

   ii) Theophyline has additive action with

   a) Ephedrine b) Physostigmine

   c) Acetylcholine d) None of these.

   iii) Which of the following is a ganglion blocking agent ?

   a) Hexamethonium b) Acetylcholine

   c) Scopolamine d) None of these.

   iv) Select the cell cycle non-specific antineoplastic drug :

   a) Vincristine b) Bleomycin

   c) Methotrexate d) 5-Fluorouracil.

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v) Apoptosis prevented by

a) P 51 b) P 52

c) P 53 d) P 450.

vi) Mesna is administered with cyclophophamide and ifosphamide to

a) Potentiate their cytotoxic action

b) Retard their renal excretion

c) Block their emetic action

d) Ameliorate cystitis caused by them.

vii) Piracentam is used as

a) Anti-epileptic drugs b) Nootropic drug

c) Antibacterial drug d) Antibiotic.

viii) Ca enters the cell by

a) Voltage-gated calcium channel

b) Light-gated calcium channel

c) $Na^{+} - Ca^{+}$channel

d) All of these.

ix) Receptor is a

a) Enzyme b) Protein

c) Vitamin d) None of these.

x) Gluneapig Ileum is highly sensitive to

a) Ach b) Histamine

c) Oxytocin d) Serotonin.

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xi) An agent which has affinity for receptors but shows negative efficacy is called

a) Agonist b) Partial agonist

c) Inverse agonist d) Antagonist.

xii) Steroid receptors are

a) G-protein coupled receptors

b) Liquored-gated ion channel

c) Nuclear receptors

d) None of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. What do you mean by bioassay ? Write down the advantages and disadvantages of bioassay.

3. Briefly explain the pathophysiology of Alzheimer's disease.

4. Discuss the role of cytochrome P 450 in biotransformation.

5. Write a short note on drug interactions.

6. Explain the role of B-lymphocytes in the immove system.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. a) Define and classify receptors.

b) Write a note on the functional mechanism of GPCR.

c) Define the terms

i) Partial agonist

ii) Competitive antagonist (with examples). 4 + 7 + 4

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8. a) Define Apoptosis. What is the difference between apoptosis and necrosis ? 1 + 4

   b) Explain the death receptor pathway and mitochondrial pathway in apoptosis. 10

9. a) Define immunomodulators.

   b) Classify the drug used as immuno-suppressive agents.

   c) Write down the immuno-suppressive mechanism of cyclosporine & glucocorticoids. 2 + 4 + 9

10. a) Explain the pathophysiology of Parkinson's disease.

    b) Classify the drugs used to treat Parkinson's disease.

    c) Explain the mechanism of action, adverse effects and ADME of Levodopa in Parkinson's disease.

11. a) Describe the steps of the cell cycle.

    b) What is the relation between cell-cycle and cancer chemotherapy ? Name some cell-cycle specific drugs, mentioning the state at which they act. 8 + 2 + 5

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