UKA TARSADIA UNIVERSITY

M. Pharm (Pharmacology); Semester – I, Year: 2011-2012

Subject Code: 040050103

Subject Name: Advances in Pharmocology

Max Marks: 70

Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.
5. Draw diagrams/figures whenever necessary.

Q-1 (A) Do as directed: **[07]**

I) Write name of selective 5HT 1B/1D receptor agonist.
II) Name macrophages stimulators.
III) Write mechanism of ondansetron
IV) Enumerate various drugs used in the treatment of Myathenia Gravis
V) Write functions of Thromboxane A2.
VI) Write name of anticholinergic used in the treatment of Parkinsonism.
VII) Write sources of Pilocarpine and Muscarine.

Q-1 (B) Answer the following in brief: (Any 4) **[08]**

I) Justify the statement: Ach is not used therapeutically.
II) Differentiate Physostigmine and Neostigmine
III) Classify ganglion blocking drugs.
IV) Explain Triple response of Histamine
V) Explain action of adrenaline on aqueous humor dynamics.
VI) Briefly describe role of alpha blockers in the treatment of benign hypertrophy of prostate.

Q-2 Answer the following: **[10]**

(A) Explain physiology and pharmacology of histamine H_3 receptors.

OR

(A) Write a note on anorectic agents.
(B) Describe role of Prostaglandins' in the kidney and CNS function

OR

(B) Write a note on second generation antihistaminics and their uses.

Q-3 Answer the following in detail. (Any 2) **[10]**

(A) Explain in detail uses of various beta blockers.
(B) Discuss functional role of $5HT_7$ receptors.
(C) Write a note on calcineurin inhibitors.

Q-4 (A) Do as directed: **[07]**

I) What is post antibiotic effect (PAE)?

II) Identify the drug comprising following properties
1. Analogue of Acyclovir. 2. Preffered *i.v.* and shows high accumulation in vitreous humor. 3. Used for treatment of serious and vision threatening retinitis due to Cytomegalovirus (CMV).

III) Drug interaction: Sulfamethoxazole and Trimethoprim.

IV) Write mechanism of action of Carmustine as antineoplastic drug.

V) Identify the drug comprising following properties
1. Derived from *Streptomyces avermitilis*. 2. Drug of choice in Onchocerciasis.
3. Activates nematode specific glutamate mediated, voltage gated Cl^- channels.

VI) Drug interaction: Amphotericin-B and Flucytosine.

VII) Enlist at least two agents that show Time dependent killing (TDK) with shorter Post antibiotic effect (PAE).

Q-4 (B) Answer the following in brief: (Any 4) **[08]**

I) How Sulfonamides leads to Kernicterus in neonates?

II) Justify use of Sulbactum with Ampicillin for the treatment of pneumonia.

III) Explain the mechanism of Neuromuscular blockade by Aminoglycosides.

IV) Explain mechanism of action of Enfuvirtide in short.

V) Classify antineoplastic drugs based on Cell cycle specificity.

VI) Justify use of Vitamin B_6 along with Isoniazid.

Q-5 Answer the following: **[10]**

(A) Explain toxicities related to drug used in Cancer chemotherapy along with one example for each.

OR

(A) Name the antimicrobial agent producing following adverse reactions and discuss their symptoms with treatment or prevention.
(i) Gray baby syndrome (ii) Ototoxicity

(B) Explain replicative cycle of HIV alongwith mechanism of action of Antiretroviral drug.

OR

(B) Explain the life cycle of malarial parasite.

Q-6 Answer the following in detail. (Any 2) **[10]**

(A) What is DOTS? Explain drug regimen recommended by WHO for the treatment of Tuberculosis.

(B) Write a note on HAART. Explain the significance of it in treatment of AIDS.

(C) Write mechanism of action, therapeutic uses and adverse effects of Chloroquine.