UKA TARSADIA UNIVERSITY
MALIBA PHARMACY COLLEGE
First Semester M. Pharm
Internal Examination 2012
Cellular and Molecular Pharmacology (040050102)

Date: 29/11/2012 **Time: 1.30 TO 4.30 PM**
Total Marks: 70

Instructions:
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Draw diagrams/figures whenever necessary

Q-1

(A) Attempt the followings **[07]**

i. Enlist secondary messengers associated with G-protein coupled receptors
ii. Enlist the mechanism of transport across the cell Membrane
iii. Define Tachyphylaxis
iv. Enlist the therapeutic uses of adrenergic receptor antagonist
v. Define Dose response Curve
vi. Enlist the mechanism of transport across the cell Membrane
vii. Define Desensitization

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

i. Differentiate between ion channel receptors and nuclear receptors
ii. Explain potency and efficacy with example
iii. Explain mechanism of action of beta blocker in CHF
iv. Explain role of Interferons in immunological disorders
v. Differentiate between partial and inverse agonist

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

A) Discuss the signaling pathway of apoptosis

OR

A) Nuclear receptor show slower onset and longer duration of action mechanism- Justify the statement with suitable explanation and examples.
B) Describe various transport mechanisms across cell membrane

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

A) Define drug antagonism. Describe various type of drug antagonism with examples.
B) Write a note on drug receptor theory
C) Write note on beta - adrenergic receptors- location, type, signal transduction and agonist-antagonists.

Q-4 (A) Answer the following **[07]**

i Enlist pharmacological actions of prostacyclin

ii. Give location and signal transduction mechanisms ET_A receptor

iii. Give example of specific D2 receptor agonist and antagonist

iv. Enlist different cytokines involve in Inflammatory responses.

v. Give signal transduction mechanisms of NMDA receptor

vi. What is gene therapy?

vii. Classify purine receptors

(B) Answer the following: (Any 4) **[08]**

i. Explain bradykinin role in inflammation.

ii. Give biosynthetic pathway of prostaglandins

iii. Give the example of Calcium channel modulators and justify their use in angina

iv. How GABA plays role in inhibitory post synaptic potential?

v. Give the example of potassium channel modulators and justify their use in arrhythmia

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

A) Discuss the role of Leukotrienes modulators in inflammatory diseases

B) Explain endothelin receptors with location and their pharmacological actions

OR

A) Explain biosynthesis and physiological actions of nitric oxide

B) Justify the use of Calcium channel modulation in hypertension, arrhythmia and heart failure

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

A) Describe the role of GABA receptors in the CNS.

B) Enlist dopaminergic receptors subtypes. Describe their signal transduction mechanism and location in body

C) Write a note on gene therapy