



Name :

Roll No. :

Invigilator's Signature :

CS/M.Pharm/SEM-1/MPT-108(2)/2009-10

2009

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 × 1 = 10
- i) Angiogenesis stimulator is
 - a) VEGF
 - b) Endostatin
 - c) Angiostatin
 - d) Tumstatin.
 - ii) Cyclosporine is an immunosuppressant which binds with
 - a) extracellular cyclophilin
 - b) intercellular cyclophilin
 - c) intercellular calcinurin
 - d) extracellular calcinurin.
 - iii) Nitric oxide (NO) relaxes the smooth muscle in the vessel wall by activating
 - a) PKA
 - b) PKC
 - c) PKG
 - d) cAMP.



- iv) Methotrexate inhibits
 - a) Folic acid synthesis
 - b) Tetrahydrofolate synthesis
 - c) DNA synthesis
 - d) RNA synthesis.
- v) PECAM-1 is also known as
 - a) CD56
 - b) CD106
 - c) CD31
 - d) CD8.
- vi) P-Selectin is mainly present in
 - a) Endothelial cells
 - b) Leukocytes
 - c) Platelets
 - d) RBC.
- vii) The mammalian NF- κ B family has members.
 - a) two
 - b) three
 - c) five
 - d) six.
- viii) Paracrine action means action on
 - a) same
 - b) nearby
 - c) distant
 - d) blood cells.
- ix) Breast cancer is treated by augmenting
 - a) p53 gene expression
 - b) VEGF gene expression
 - c) IL-2 gene expression
 - d) TNF-alpha gene expression.
- x) BMI more than is severe obesity.
 - a) 15.9
 - b) 18.5
 - c) 40
 - d) 30.



- xi) Atherosclerosis is associated with high level of
- a) LDL
 - b) Calcium
 - c) Magnesium
 - d) Protein.
- xii) is often referred to as suicide gene.
- a) Adenosine kinase
 - b) Thymidine kinase
 - c) Protein kinase
 - d) Guanidine kinase.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Explain the following Lymphokine, Monokine, Chemokine and Interleukins ?
3. Describe the role of PGE_2 in chronic inflammation.
4. Write short note on $TNF-\alpha$.
5. Write brief about Glutamate receptors in the CNS.
6. What is meant by Lipid profile test ? How can you diagnosis atherosclerosis by this test ?

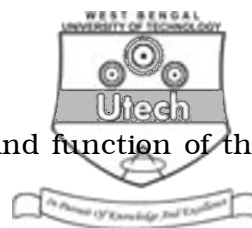
GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. a) Describe the process of tumour angiogenesis.
- b) Write short notes on the following :
 - i) VEGF and
 - ii) Endostatin.

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8. Mention the producing cells, target cells and function of the following cytokines :

IL-2, IL-4, IL-5, IL-10 and IL-12.

9. What do you mean by Gene therapy ? Write about basic concept of antisense therapy. How can you treat cancer and AIDS by antisense therapy ?

10. Mention the physiological function of Nitric Oxide (NO). Write the importance of NO in pharmacotherapy of Angina, Erectile dysfunction and Hypertension.

11. Write brief notes on any *three* of the following :

- a) Opioid receptors agonist
- b) Major antiepileptic drugs
- c) Dopamine receptor pharmacology
- d) GABA receptor's subtypes and their pharmacology.