Name :	٨
Roll No.:	An Administration of Experience and Experience
Invigilator's Signature :	
CS/M Pharm/S	SEM-1/MPT-105(2)/2011-12

2011

MODERN CONCEPTS OF 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) Viral vector(s) involved in gene therapy is/are
 - a) Herpes virus
- b) Retro virus
- c) Adeno virus
- d) All of these.
- ii) Nitric Oxide (NO) relaxes smooth muscle in the vessel wall by activating
 - a) cAMP

b) PKc

c) PKG

- d) cGMP.
- iii) Glutamate receptor is a
 - a) kinase-lined
 - b) transmembrane
 - c) ion gated
 - d) nuclear.

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- iv) Glucocorticoid belongs to the
 - a) ligand gated ion channel family
 - b) G-protein coupled receptor family
 - c) tyrosine kinase family
 - d) nuclear receptor family.
- v) Nitric oxide is synthesized from
 - a) L-arginine
- b) guanine

c) serine

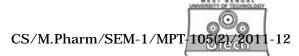
- d) histidine.
- vi) A non-viral vector in gene therapy is
 - a) liposome
- b) transdermal
- c) monoclonal antibody
- d) I.V. infusion.
- vii) In coronary heart disease the ratio of which of the following is increased
 - a) VLDL / LDL
- b) LDL / HDL
- c) HDL / LDL
- d) HDL / VLDL.
- viii) Pathological angiogenesis is required for
 - a) growth of child
 - b) growth of muscle
 - c) growth of tissue
 - d) growth of granulating tissue.
- ix) Bradykinin contains amion acids.
 - a) nine

b) nineteen

c) ninety

d) one hundred nine.

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- x) Positive regulaters of the cell cycle are
 - a) cyclin dependent kinases
 - b) P 53 gene
 - c) tumor necrosis factor
 - d) none of these.
- xi) Cancer chemotherapy finds it difficult to kill cells in the following phase of the cell cycle
 - a) S

b) *G*

c) G_1

d) M.

GROUP - B

(Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. What is suicide gene? What are the modern approaches of gene therapy in cancer? 3+2
- 3. Write about the antisense therapy.
- 4. Mention the role of TNF- α and interleukin in inflammation.
- 5. Write a short note on transgenic animals.
- 6. Name the excitatory neurotransmitters in CNS. What is the role of Glutamate receptors in long term potentiation?



GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following.

 $3 \times 15 = 45$

- 7. What do you mean by pharmacogenetics? How does it influence the drug responses? Explain with examples. 7 + 8
- 8. Mention the physiological function of nitric oxide (NO). Write the importance of NO in pharmacotherapy of angina, erectile dysfunction and hypertension. 6+9
- 9. Write about the stem cell. What are the implications of stem cell in therapy? 10 + 5
- 10. Write short notes on any *two* of the following : $2 \times 7\frac{1}{2}$
 - a) Hypertension and its management
 - b) Cardiac arrhythmias and their management
 - c) Management of epilepsy.
- 11. a) Describe the journey of a cell through the cell cycle.
 - b) Explain "apoptosis" and its relevance to cancer $7\frac{1}{2} + 7\frac{1}{2}$

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