

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - February 2007

Time : 3 Hrs.

[Max. Marks : 100]

PHYSIOLOGY - Paper II (Revised Scheme II)

QP Code : 1078

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

- Describe the steps in the biosynthesis and release of thyroid hormones and indicate the clinical application of this knowledge.
- Describe the immediate effects of complete transection of the spinal cord at midthoracic level and explain the basis of these effects.

SHORT ESSAY

10 X 5 = 50 Marks

- List four factors that inhibit growth hormone secretion. Name other hormones regulating growth.
- Explain the basis of two features that are seen in hyperfunctioning of the adrenal cortex.
- Explain the basis of:
 - intensity discrimination
 - localization of stimulus.
- In a tabular column compare the features of upper motor neuron lesion and lower motor neuron lesion.
- Draw diagrams to show image formation in the hypermetropic and myopic eye. Explain the basis of correction.
- Explain 'Dark adaptation'.
- Draw a diagram to show the pathway for light reflexes.
- Explain 'impedance matching' and give its significance.
- Explain the genesis of resting membrane potentials.
- Explain the length tension relationship in skeletal muscle.

SHORT ANSWERS

10 X 3 = 30 Marks

- List six secondary sexual characteristics in males.
- List the actions of oestrogens on the mammary gland.
- List the factors regulating spermatogenesis.
- Name the mechanism by which oral contraceptives prevent pregnancy.
- Give the locations and role of thermoreceptors.
- Compare the role of troponin and calmodulin.
- Explain the mechanism of action of local anaesthetics.
- Explain the role of synaptic inhibition.
- Draw a diagram to show the structure of the muscle spindle.
- Explain the basis of 'mass reflex'.
