

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

Post Graduate Degree Examination – April / May - 2014

Time : 3 Hrs.

[Max. Marks : 100]

M.D PHYSIOLOGY

PAPER - I

Q.P Code : 1201

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 20 = 40 Marks

1. Describe in detail the genetic control of protein synthesis.
2. Describe in detail pathophysiology of edema.

SHORT ESSAY

6 X 10 = 60 Marks

3. Gating of ion channels.
4. Pavlov's Contribution to physiology.
5. Compare action potential with local potential.
6. Programmed cell death.
7. Functions of $\text{Na}^+ - \text{K}^+$ pump and its clinical importance
8. Feedback mechanisms.

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M.D PHYSIOLOGY

PAPER - II

Q.P Code : 1202

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LONG ESSAY

2 X 20 = 40 Marks

1. Explain the properties of cardiac muscle. What are the differences between pacemaker potential and ventricular muscle action potential?
2. Explain the role of kidney as an endocrine gland.

SHORT ESSAY

6 X 10 = 60 Marks

3. Describe the regulation of salivary juice secretion.
4. Explain the complications of mismatched blood transfusion and how to prevent it.
5. Static and dynamic lung function tests.
6. Explain the bleeding and clotting disorders.
7. Describe the importance of Baroreceptors and chemoreceptors
8. What is dysbarism? How is it prevented?

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PAPER - III

Q.P Code : 1203

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LONG ESSAY

2 X 20 = 40 Marks

1. Discuss the formation of Hydroxy Cholecalciferol. Add a note on Rickets and Osteomalacia.
2. Discuss the complementary specialization of Cerebral hemisphere versus cerebral dominance. Add a note on global aphasia.

SHORT ESSAY

6 X 10 = 60 Marks

3. Inhibitory pain pathways.
4. Diagrammatically represent the principle connections of Basal Ganglia.
5. Molecular Basis of short term and long term memory.
6. Define Plasticity as applicable to the muscle. Explain this property of the smooth muscle.
7. Write about Muller's law of specific Nerve energies.
8. Physiological effect of Thyroid hormones on CVS and GIT.

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M.D PHYSIOLOGY

PAPER - IV

Q.P Code : 1204

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LONG ESSAY

2 X 20 = 40 Marks

1. Describe the various phases of the menstrual cycle and their hormonal regulation.
2. Describe the mechanism of transduction of sound into electrical impulses in the auditory nerve by the cochlea. Elaborate the ascending auditory pathways. Add a note on deafness.

SHORT ESSAY

6 X 10 = 60 Marks

3. Explain the photoreceptor mechanism and the neural basis of vision.
4. Physiology of lactation.
5. Biological clock of the human body.
6. Feto-placental unit.
7. Physiology of ageing.
8. Family planning.

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