# SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH (A DEEMED TO BE UNIVERSITY)

# M.B.B.S. PHASE – I Degree Examination – July -2014

Time: 3 Hrs. [Max. Marks: 100]

#### PHYSIOLOGY-PAPER I

**Q.P Code: RS-103** 

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

### **LONG ESSAY** (Answer any 2 only)

 $2 \times 10 = 20 \text{ Marks}$ 

- 1. What is cardiac cycle. Describe the pressure-volume changes in left ventricle. Add a note on second heart sound
- 2. Describe the oxygen-Haemoglobin disassociation curve. List the factors which shift it to the right. Add a note on Bohr's effect.
- 3. What is haemostasis? Explain the steps of intrinsic system of blood clotting. Add a note on haemophilia.

#### **SHORT ESSAY** (Answer any 10 only)

10 X 5 = 50 Marks

- 4. Regulation of gastric juice secretion.
- 5. Functions of bile juice.
- 6. Juxta glomerular appartus.
- 7. Functions of pancreatic juice.
- 8. Surfactant.
- 9. Counter current systems in kidney.
- 10. Ventricular action potential.
- 11. CNS ischemic response.
- 12. Functions of plasma proteins.
- 13. Special features of cerebral circulation.
- 14. Osmosis.
- 15. B lymphocytes.

SHORT ANSWERS  $10 \times 3 = 30 \text{ Marks}$ 

- 16. Define cardiac output, stroke volume and cardiac index.
- 17. Active and reactive hypereamia.
- 18. Diagram of ECG from Lead II.
- 19. Define and classify Hypoxia.
- 20. Small intestine motility.
- 21. Small intestinal secretions.
- 22. Renal splay.
- 23. Define compliance. What is the normal value in lungs alone.
- 24. Break down products of hemoglobin.
- 25. Name the respiratory centers.

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#### PHYSIOLOGY-PAPER I I

**Q.P Code: RS -104** 

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#### **LONG ESSAY** (Answer any 2 only)

 $2 \times 10 = 20 \text{ Marks}$ 

- 1. Describe the pain pathways. add a note on reffered pain
- 2. Describe the physiological actions of growth hormone. How is it regulated. Add a note on acromegaly
- 3. Classify smooth muscles. Explain the steps of excitation contraction coupling in smooth muscle.

#### **SHORT ESSAY** (Answer any 10 only)

10 X 5 = 50 Marks

- 4. Visual pathway.
- 5. Spermatogenesis.
- 6. Connections and functions of vestibulocerebellum.
- 7. Functions of placenta.
- 8. Synaptic inhibition.
- 9. Role of hypothalamus in food intake.
- 10. Strength duration curve.
- 11. Theories of hearing.
- 12. Hypothyroidism.
- 13. List the hormones regulating glucose homeostasis. Explain the actions of any one.
- 14. Milk ejection reflex.
- 15. Physiological actions of testosterone.

#### **SHORT ANSWERS**

10 X 3 = 30 Marks

- 16. Myopia.
- 17. Functions of middle ear.
- 18. Primary taste sensations.
- 19. Glaucoma.
- 20. Functions of CSF.
- 21. Bell-magendies law.
- 22. Diagram of neuron.
- 23. Tetany.
- 24. Causes for infertility in females.
- 25. Functions of skin.

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#### PHYSIOLOGY- PAPER I

Q.P Code: SDUU -103

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LONG ESSAY  $2 \times 10 = 20 \text{ Marks}$ 

- 1. List the special features of coronary circulation. How is it measured. Describe the factors affecting it.
- 2. What is countercurrent mechanism? Describe the role of counter-current multiplier in urine formation.

#### **SHORT ESSAY**

10 X 5 = 50 Marks

- 3. Erythropoiesis.
- 4. Radial pulse.
- 5. Classify and discuss shock with examples.
- 6. Surfactant.
- 7. Intercellular connections.
- 8. Haldane's effect.
- 9. Immunoglobulins.
- 10. Functions of large intestine.
- 11. Mechanism of secretion of hydrochloric acid in Stomach.
- 12. Triple response of lewis.

#### **SHORT ANSWERS**

10 X 3 = 30 Marks

- 13. Functions of bile.
- 14. Sham feeding.
- 15. Heart block.
- 16. Enumerate three non-respiratory functions of lungs.
- 17. Functional residual capacity-definition, normal value and significance.
- 18. Steatorrhoea.
- 19. Caisson disease.
- 20. Artificial kidney.
- 21. Compliance.
- 22. Factors influencing cerebral circulation.

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### M.B.B.S. PHASE - I Degree Examination - July-2014

Time: 3 Hrs. [Max. Marks: 100]

### PHYSIOLOGY - PAPER II

Q.P Code: SDUU -104

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

#### LONG ESSAY

 $2 \times 10 = 20 \text{ Marks}$ 

- 1. Describe auditory pathways with diagram and explain the mechanism of hearing.
- 2. Classify synapses and describe the mechanism of transmission of impulses across synapses. Add a note on synaptic inhibition.

#### **SHORT ESSAY**

10 X 5 = 50 Marks

- 3. Compound action potential.
- 4. EEG (Electroencephalogram) changes during different stages of sleep.
- 5. Muscle tone and its supra spinal control.
- 6. Association areas of cerebral cortex.
- 7. Endometrial and ovarian changes during normal menstrual cycle.
- 8. Inverse stretch reflex and crossed extensor reflex.
- 9. Hypothalamo-pituitary-adrenal axis.
- 10. Effects of lesion of left internal capsule.
- 11. Connections of neo-cerebellum and their functions.
- 12. Role of hormones acting on osteoblasts and osteoclasts.

#### **SHORT ANSWERS**

10 X 3 = 30 Marks

- 13. Conn's syndrome.
- 14. Vasectomy and tubectomy.
- 15. Gonadotropic hormones and their actions in male and female.
- 16. Role of skin in thermoregulation.
- 17. Neuro-endocrine reflexes.
- 18. syringomyelia.
- 19. Conduction of nerve impulse in myelinated and unmyelinated nerve fibres.
- 20. Action potential recording from a mixed nerve preparation.
- 21. Types of smooth muscles and their properties.
- 22. Primary colors and color blindness.