SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)
M.B.B.S. PHASE – I Degree Examination – January-2014

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

PHYSIOLOGY PAPER I

Q.P Code : SDUU -103

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

LONG ESSAY **2 X 10 = 20 Marks**

1. What are chemoreceptors? Describe the chemical control of respiration. Add a note on Cheyne-stokes breathing?
2. What is Renin-Angiotensin-Aldosterone mechanism? What is its physiological role.

SHORT ESSAY **10 X 5 = 50 Marks**

3. Draw and label ECG in Lead II.
4. Conducting system of Heart.
5. Movements of small intestine.
6. Surfactant.
7. Immunoglobulins and their functions.
8. Neural control of micturition.
9. Glucose reabsorption in the nephron.
10. Platelet functions and its disorders.
11. Entero-hepatic circulation.
12. Pharyngeal phase of deglutition.

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Juxta-glomerular Apparatus.
14. Enumerate the endocrine functions of the kidney.
15. Plasmapheresis.
16. Landsteiner's Law.
17. Foetal Hemoglobin.
18. Megakaryocyte.
19. Einthoven's Triangle.
20. Resting membrane potential and normal values.
21. Osmoreceptor system.
22. Ligand gated channels.

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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 X 10 = 20 Marks**

1. Give the normal blood glucose concentration. Explain the hormonal regulation of glucose homeostasis.
2. Describe the connections and functions of cerebellum. List the features of cerebellar lesion.

SHORT ESSAY **10 X 5 = 50 Marks**

3. O_2 debt mechanism.
4. Sertoli cells.
5. Visual pathway.
6. Synaptic inhibition.
7. Adrenogenital syndrome.
8. Neuroglia.
9. Organ of corti.
10. Decerebrate rigidity.
11. Parathyroid hormone.
12. Functions of hypothalamus.

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Heat loss mechanisms.
14. Inverse stretch reflex.
15. Diagram of taste pathway.
16. Mechanism of action of oral contraceptive pills.
17. Sarco-tubular system in skeletal muscle.
18. Rinne's test.
19. Immunological test for pregnancy.
20. Latch bridge mechanism of muscle contraction.
21. Myopia.
22. Corpus luteum.

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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 X 10 = 20 Marks**

1. Name the clotting factors. Describe the intrinsic pathway of blood clotting. Add a note on hemophilia.
2. Define cardiac output. Explain the various factors regulating cardiac output.
3. Explain the neural regulation of respiration.

SHORT ESSAY (Answer any 10 only) **10 X 5 = 50 Marks**

4. Describe heart sounds.
5. Draw a neat labeled diagram of the conductiong system of the heart .
6. Describe bleeding and clotting disorders.
7. Enumerate the various stages of Leucopoiesis with diagram.
8. Explain the importance of Einthoven's triangle.
9. Explain the properties of smooth muscle.
10. Describe briefly the role of T-Lymphocytes in cell-mediated immunity.
11. Explain the hazards of mismatched blood transfusion.
12. Explain the composition of succus entericus.
13. Explain how iron is absorbed in the Gastro intestinal tract.
14. Explain hypochromic microcytic anemia.
15. Explain the importance of shape of RBC.

SHORT ANSWERS **10 X 3 = 30 Marks**

16. Enumerate the various factors regulating erythropoiesis.
17. Enumerate ten peculiarities of pulmonary circulation.
18. Explain the significance of residual volume.
19. Draw a neat labeled diagram of the spirogram.
20. Name the factors affecting, glomerular filliation rate.
21. Explain what is renal threshold and tubular maximum for glucose. Give the normal values.
22. Define RMP. Explain Donnan's equilibrium.
23. Describe the importance of intrapleural pressure in expansion of lung.
24. Enumerate the functions of saliva. What is siallorhoea.
25. Explain the sinoaorotic mechanism with diagram.

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PHYSIOLOGY– PAPER II

Q.P Code : RS -104

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

LONG ESSAY (Answer any 2 only) **2 X 10 = 20 Marks**

1. Name the functional lobes of cerebellum. Describe its connections and functions.
2. Draw labeled diagram to show the pathway for pain impulse from the lower limbs. Add note on referred pain.
3. Name four hyperglycemic hormones. Explain the actions of the chief hypoglycemic hormone. Add note on diabetes mellitus.

SHORT ESSAY (Answer any 10 only) **10 X 5 = 50 Marks**

4. Give the neural circuit for "crossed extensor reflex". Explain its functional importance.
5. Trace the Auditory pathway.
6. Describe the steps in the synthesis of thyroid hormone.
7. Functions of placenta.
8. Actions of growth hormone.
9. Name the hormones that play a role in calcium homeostasis. Explain the actions of any two of them.
10. Describe the symptoms in parkinsonism and give the physiological basis for this .
11. Colour blindness.
12. Differences between upper motor neuron lesion and lower motor neuron lesion.
13. Trace the taste pathway. Name primary taste sensations.
14. Define motor unit. Write briefly on its relation to muscle contraction.
15. With a help of diagram explain the steps involved in the neuro-muscular transmission.

SHORT ANSWERS **10 X 3 = 30 Marks**

16. Explain the functions of testosterone in fetal life.
17. Explain the physiological basis of oral contraceptive pills.
18. List the factors affecting spermatogenesis.
19. Define refractory period and explain its basis.
20. List the functions of the middle ear.
21. Define visual acuity? Name the area in the retina where the acuity of vision is greatest.
22. Give the location and functions of Brodmann's areas 3,1,2.
23. List the functions of CSF.
24. Actions of Oxytocin.
25. Characteristic features of Cushing's syndrome.

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