SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)
M.B.B.S. PHASE – I Degree Examination – January-2016

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. Define blood pressure giving normal values. Describe how BP is regulated by short term mechanisms.
2. Describe various functions of white blood corpuscles. Add a note on agranulocytosis.

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

3. Functions of respiratory centers in regular rhythmic breathing.
4. Effects of Hyperventilation and breath holding on respiratory gases.
5. Measurement of Blood volume by an indirect method.
6. Stages in the development of Erythrocytes.
7. Intrinsic coagulation pathway.
8. Mechanism of Deglutition in different stages.
9. Digestion of proteins in Gastro Intestinal tract.
10. Movements of small and large intestines.
11. Functions of juxta - glomerular apparatus.
12. Salient features of cerebral circulation.

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

13. Factors determining gaseous exchange at alveoli.
14. Acclimatization changes in high altitude.
15. Pernicious anemia.
16. Complications of Rh incompatibility in pregnant woman.
17. Blood indices and their significance.
18. Mechanism of formation of concentrated urine.
19. Dyspnea and Apnoea.
20. Describe briefly origin and spread of impulse in human heart.
21. Ischemia of myocardium.
22. Triple response.

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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. Describe the pathways transmitting proprioceptive sensation to brain.
2. Name the hormones of pituitary gland and explain in detail about the functions and regulation of growth hormone.

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

3. Explain the term EPSP and IPSP.
4. Describe briefly the basis and features of myasthenia gravis.
5. Describe the molecular basis of muscle contraction briefly.
6. Draw the diagram of muscle spindle and describe its importance.
7. Describe the mechanism of impedance matching in the middle ear.
8. Describe inverse stretch reflex giving its clinical significance.
9. Describe the functions of cerebellum.
10. Describe the functions of placenta.
11. Explain the physiological basis of memory.
12. Describe how normal serum calcium level is regulated.

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

13. List the cardinal features of diabetes mellitus and their physiological basis.
14. Explain how adequate sleep promotes growth of an individual.
15. Long term memory and its application.
16. Describe briefly aldosterone escape.
17. Define the far point and near point of vision.
18. Mention the features of Turners syndrome.
19. Sertolli cells.
20. Explain myopia, hypermetropia and presbiopia.
21. Mention the basis of color blindness.
22. Explain the physiological basis of tetany.

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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 Two) **2 X 10 = 20 Marks**

1. Draw an oxygen dissociation curve and describe the transport of oxygen in blood. Depict the Bohr's effect.
2. Describe the regulations of arterial blood pressure by neural mechanisms. Mention the physiological basis of hypertension.
3. Describe the stages of erythropoiesis and the factors regulating it.

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

4. Erythroblastosis fetalis.
5. Actions of Endothelins.
6. List four hormones of GIT. Explain the actions of any one of them.
7. Lung compliance.
8. Properties of cardiac muscle. Explain any one in detail.
9. Countercurrent multiplier system in kidney.
10. Glucose reabsorption in the kidney.
11. Composition and functions of Saliva.
12. Regulation of body temperature.
13. Axon reflex.
14. Dysbarism.
15. Act of Micturition.

SHORT ANSWERS (No choices) **10 X 3 = 30 Marks**

16. Cross matching in blood groups.
17. Functions of platelets.
18. Heart sounds.
19. Movements of small intestine.
20. Post prandial alkaline tide.
21. State the Poiseuille Hagen formula. Explain its significance.
22. Timed vital capacity and its clinical significance.
23. List three functions of plasma proteins.
24. List three functions of liver.
25. Name two diuretics and its mechanism of action.

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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 Two) **2 X 10 = 20 Marks**

1. Enumerate the hormones of auterior pituitary gland. Explain the secretion and function of growth hormone.
2. Describe the origin, course and functions of pyramidal tracts. Enlist the effects of lesions of the left pyramidal tract at the level of internal capsule.
3. Write about reticular formation and their function.

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

4. Brown sequard syndrome.
5. Formation, fate and functions of cerebro spinal fluid (CSF)
6. Impedance matching.
7. Theories of color vision.
8. Structure, functions and peculiarity of cornea.
9. Sliding filament theory of muscle-contraction.
10. Rigor mortis.
11. Neuroendocrine reflex.
12. Spermatogenesis.
13. Formation, transport and regulation of secretion of thyroid hormone.
14. Mention the hormones of adrenal cortex. Write the functions of glucocorticoids.
15. What is dwarfism and differences between cretinism and dwarfism.

SHORT ANSWERS (No choices) **10 X 3 = 30 Marks**

16. Hypo and Hyper thyroidism.
17. Satiety center.
18. " γ " afferents to muscle spindle.
19. What is epicritic and protopathic sensation.
20. Endogenous pain relief system.
21. Dermatomal rule.
22. Myosin.
23. Tetanus.
24. Anosmia.
25. Functions of Eustachian tube.

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