

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

**M.B.B.S. PHASE – I Degree Examination – August-2017**

**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 labeled diagrams wherever necessary.*

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

**2 X 10 = 20 Marks**

1. Define arterial blood pressure. Mention normal values. Explain the long term regulation of blood pressure.
2. Describe the blood groups and their significance. What is the importance of RH factor.
3. Explain in detail about oxygen transport in blood.

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

**10 X 5 = 50 Marks**

4. Secondary active transport.
5. Folic acid deficiency anemia.
6. Draw and label normal ECG. Describe the ECG changes during cardiac cycle.
7. Write briefly the chemical regulation of respiration.
8. Describe the various stages of deglutition.
9. Define glomerular filtration rate? Write the normal value and enumerate the factors that regulate glomerular filtration rate.
10. What is renal clearance? Write in detail about inulin clearance.
11. Write about the fate of haemoglobin. Write the differences between the various types of jaundice?
12. Define dead space? Write the different types of dead space? What is the function of dead space.
13. Name the hormones secreted by gastro intestinal tract and add a note on their function.
14. Write in detail about the kety method for measurement of coronary blood flow.
15. Write about the portal hypertension.

**SHORT ANSWERS (No Choices)**

**10 X 3 = 30 Marks**

16. Timed vital capacity.
17. Write about the artificial kidney?
18. Name some intravascular coagulants and add a note on functions of one of them.
19. Write about incomplete heart block.
20. What is achalasia cardia?
21. Chylomicrons.
22. Write about reticulocyte response.
23. What is bernoullis principle.
24. Write about chloride shift.
25. Write about the renal threshold for glucose.

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**PHYSIOLOGY– PAPER II**

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

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY (Answer any two only)**

**2 X 10 = 20 Marks**

1. Trace the pathway of the most important motor tract. Tabulate the differences between the Extrapyramidal and pyramidal system.
2. Describe the connections and functions of basal ganglia. Add a note on Parkinson's disease.
3. Explain the nuclei and connections of hypothalamus, with diagram. Add a note on hypothalamic obesity.

**SHORT ESSAY (Answer any ten only)**

**10 X 5 = 50 Marks**

4. Explain the physiologic basis of referred pain?
5. Explain the physiologic basis of decerebrate rigidity?
6. Explain the functions of middle ear.
7. Define Chronaxie and Rheobase. Name two factors influencing chronaxie.
8. Classify neuromuscular blocking agents. Explain the mechanism of action of any two.
9. Explain feto placental unit.
10. Name the body fluid compartments. Explain how E.C.F is measured.
11. Explain the synthesis of thyroxine hormone.
12. Explain the various types of stunted growth.
13. Define ovulation. Explain the physiologic basis of ovulation.
14. Explain the physiologic basis of babinski's sign.
15. Explain the clinical significance of EEG.

**SHORT ANSWERS (No Choices)**

**10 X 3 = 30 Marks**

16. Draw a neat labeled diagram of the optic pathway.
17. Enumerate the peculiarities of olfactory sensation. What is anosmia?
18. Write briefly on corpus leuteum.
19. Write short note on intra uterine contraceptive devices.
20. Inhibitory post synaptic potentials (IPSP)
21. Stages of spermatogenesis.
22. Write briefly on Addison's disease.
23. Tabulate the features of cretinism and dwarfism.
24. In vitro fertilization-Write briefly.
25. Enumerate properties of receptors in CNS.

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**[Max. Marks : 100]**

**PHYSIOLOGY- PAPER I**

**Q.P Code : RS -203**

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Mention the respiratory centers and their location. Describe the neural regulation of respiration. Add a note on biot's breathing.
2. Draw the labeled diagram of the conducting system of the heart. Describe the origin and spread of cardiac impulse.

**SHORT ESSAY**

**10 X 5 = 50 Marks**

3. Immunoglobulins.
4. Acclimatization to high altitude.
5. Renal clearance of PAH and glucose.
6. Mechanism of HCL secretion.
7. Functions of large intestine.
8. Intercellular communications.
9. List the properties of cardiac muscle. Add a note on refractory period.
10. Macrocytic anaemia.
11. What is microcirculation and explain the pressures in it.
12. Fibrinolytic system in blood.

**SHORT ANSWERS (No Choices)**

**10 X 3 = 30 Marks**

13. Which is renal counter current exchangers and how they operate.
14. Special features of renal circulation.
15. Dysbarism.
16. Importance of vitamin K in blood clotting.
17. Sequence of partial gastrectomy.
18. The autonomic effects on cardiac activity.
19. What is Bombay blood group.
20. Micturition reflex.
21. Compliance of lungs.
22. What are chologogues and choleretics.

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**PHYSIOLOGY - PAPER II**

**Q.P Code : RS -204**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. What is limbic system? Enlist structures included in limbic system. Describe connections and functions of hypothalamus.
2. Enlist hormones secreted by anterior pituitary. Describe functions of growth hormone.  
Add a note on acromegaly.

**SHORT ESSAY**

**10 X 5 = 50 Marks**

3. Explain structure and functions of parathyroid hormone. Add a note on tetany.
4. Describe optic pathway along with effects of lesions at various sites.
5. What is the composition of semen. Add note on functions seminal vesicles.
6. Explain functions of prefrontal lobe. Add a note on effects of lesions to prefrontal lobe.
7. Describe excitation contraction coupling. Add a note on rigormortis.
8. Enlist hormones secreted by adrenal cortex. Describe actions of cortisol.
9. What are types of deafness? Add a note on audiometry.
10. What is ovulation? Add a note on corpus luteum.
11. Enlist descending tracts. Describe origin and course of pyramid tract.
12. What are the modalities of taste sensation. Describe taste pathway.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

13. What is dwarfism.
14. Draw and label olfactory pathway.
15. Explain functions of thalamus.
16. What is red muscle and white muscle.
17. What is cretinism.
18. Alzheimer's disease.
19. Enlist functions of representational hemisphere.
20. Enlist properties of nerve fiber.
21. Draw and label sarcomere.
22. What is fast pain?

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