

# SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

MBBS PHASE - 1 SUPPLEMENTARY EXAMINATION MAY 2022

Time: 150 Minutes

Max Marks: 80 Marks

Date: 09-05-2022

## PHYSIOLOGY PAPER - 1 QP CODE: -C1021

*Your answer should be specific to the question asked  
Draw neat labeled diagrams wherever necessary*

### Long Essay

10 × 2 = 20 Marks

1. Define cardiac cycle and give its normal duration. Describe various events occurring on the leftside of the heart during cardiac cycle. (1+1+8)
2. Mr. Cook who is an athlete is practicing breathing exercise. He takes a long breath in through his nose.
  - a. Name the muscles involved in respiration (03)
  - b. With the help of a neat labelled diagram, describe the pressure and volume changes in lung during ventilation. (7).

### Short Essay

5 × 12 = 60 Marks

3. List the steps of Hemostasis. Describe the role of platelet in Hemostasis.
4. 5-year-old Rahul caught the flu at school and returned home with watery eyes, running nose and fever. His mother Ramya, stayed by his side and took care of him, but she did not catch the flu.  
Explain the innate and adaptive immune responses mounted by Ramya's body against the flu.
5. Differentiate between active and passive transport systems
6. Explain blood storage for transfusion purposes
7. Draw a neat labelled diagram of ventricular action potential with the role of ions. Explain why the cardiac muscle does not get tetanized.
8. Explain the role of baroreceptors in short term regulation of BP.
9. Describe Pavlov's experiment in regulation of gastric juice secretion.
10. Explain the physiological basis for edema associated with liver failure.
11. List the different methods of artificial respiration and cardiopulmonary resuscitation and mention their principles.
12. Describe the mechanism of acclimatization in high altitude
13. Define GFR. State the normal value. Explain the role of afferent arterioles in regulating GFR.
14. Explain the physiological basis for absence of protein in the urine.



# SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

MBBS PHASE - I SUPPLEMENTARY EXAMINATION MAY 2022

Time: 150 Minutes

Max Marks: 80 Marks

Date: 10-05-2022

## PHYSIOLOGY PAPER - II QP CODE: - C1022

*Your answer should be specific to the question asked  
Draw neat labeled diagrams wherever necessary*

### Long Essay

10 × 2 = 20 Marks

1. List and describe the functions of growth hormone. Add a note on pituitary Dwarf
2. Mention the functions of Basal Ganglia. Explain the cause, feature and treatment of Parkinsonism.

### Short Essay

5 × 12 = 60 Marks

3. Describe the physiological actions of thyroid hormone on basal metabolism and CNS.
4. List the hormones secreted from different layers of adrenal cortex. Describe two functions of each hormone
5. Explain the role of ATP in skeletal muscle contraction and relaxation.
6. Draw a neat labeled diagram of a nerve action potential and explain its ionic basis.
7. Define oxygen debt. List the causes for oxygen debt.
8. Describe isometric and isotonic muscle contraction with examples
9. Draw a neat labelled diagram of the pathway of fast pain from receptor to center.
10. Draw a neat labelled diagram of muscle spindle. List its functions. (2+3)
11. The teacher of a 10-year-old student who sits in the last row, noticed her student's class notes were incomplete. On inquiring, she got to know the student is unable to clearly visualize the blackboard and what is written on it by the teacher. The student had no problem reading her books.
  - A. Name the refractive error the student is suffering from. (1)
  - B. With a neat labelled diagram illustrate the refractive error and its correction (4)
12. Draw a labeled diagram of taste pathway. Define hypogeusia
13. Explain the hormonal regulation of the menstrual cycle
14. Describe the physiological changes occurring in the mother during pregnancy on GIT and endocrine system.

