



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

MBBS Phase I Examination - January 2023

Time: 150 Minutes

Max Marks: 80 Marks

Physiology Paper I 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. With the help of diagrams explain the volume and pressure changes in the left ventricle. (2+8)
2. With neat labeled diagram describe the hemoglobin oxygen dissociation curve. Mention the factors that shift the curve to the right. (3+4+3)

Short Essay

5 × 12 = 60 Marks

3. Describe the role of platelets in Haemostasis
4. Students in an introductory laboratory class are able to isolate protein, carbohydrate and lipid makeup of basolateral membranes of gut epithelial cells. Describe the functions for each of the above components of the isolated membrane
5. Explain antibody mediated immunity. Describe primary and secondary responses
6. Explain different mixtures used for storage of blood for transfusion
7. Define circulatory shock. List and describe the clinical features of hypovolemic shock.
8. Explain the role of baroreceptor reflex in Blood pressure regulation when a person stands up from supine position.
9. Explain why enterohepatic circulation is helpful in fat digestion.
10. Explain the effects of total gastrectomy
11. Classify hypoxia with examples. Explain the mechanism by which chronic hypoxia results in polycythemia vera
12. Describe the mechanism of acclimatization in high altitude
13. Explain the renal handling of glucose
14. With the help of flow chart explain micturition reflex.



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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. A 75 year old male visited the physician with complaints of muscle weakness, loss of balance and tremors. The patient said his symptoms were increasing since eight months. On examination, hypotonia in all limbs, ataxia and past pointing, dysarthria with broad based, drunken gait and pendular knee jerk were found.
 - a) Mention the structure involved in the brain which is the site of lesion. (1)
 - b) Describe the connections of the structure involved. (3)
 - c) List the functions of the involved structure (4)
 - d) Explain the physiological basis for i) Hypotonia (1) ii) Dysarthria (1)
2. List the hormones secreted by the posterior pituitary gland. Describe the functions of each.

Short Essay

5 × 12 = 60 Marks

3. Mention the functions of muscle proteins; actin, myosin, troponin and tropomyosin.
4. Describe the action of various Neuro Muscular Junction blockers.
5. Describe the processes of heat loss from the body
6. Describe the physiological effect of cortisol on blood cells and metabolism.
7. Describe the physiological basis by which the application of a pain balm decreases pain intensity.
8. Define receptor potential. Mention the differences between receptor potential and action potential (2+3)
9. Describe the functions of Basal ganglia. Mention a disorder involving basal ganglia. (4+1)
10. Draw neat labeled diagram of cortico spinal tract (pyramidal tract)
11. Define accommodation. Describe accommodation reflex
12. Draw a neat labeled diagram of Auditory pathway. Mention two special characteristics of the pathway.
13. Describe the functions of testosterone
14. Describe the secondary sexual characters in males and females in chronological sequence