

PG Degree Supplementary Examinations in Physiology (MD)
November 2022

Paper IV - Applied Physiology Including Recent Advances

Time: 3 hrs

Max marks:100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essay:

(20)

1. Explain the physiological basis of hypokinetic and hyperkinetic lesions of basal ganglia.

Short essays:

(8x10=80)

2. Explain the pathophysiology of sickle cell anemia.
3. Explain the physiological basis of signs and symptoms in hypocalcemic tetany.
4. Discuss the contribution of Claude Bernard and Charles Scott Sherrington to modern physiology.
5. Explain neural coding in sensory system.
6. Explain the physiological basis of referred pain and phantom limb.
7. Explain the physiological decrease in DL_{CO} in i) Pulmonary edema, ii) Emphysema and iii) Anaemia.
8. Explain the mechanisms that prevent polyspermy during fertilization.
9. Discuss the role of glucocorticoids in handling stress.
