

M.D. DEGREE EXAMINATION

BRANCH V – PHYSIOLOGY

**PAPER II – CIRCULATION, RESPIRATION, ENVIRONMENTAL
PHYSIOLOGY, COMPARATIVE PHYSIOLOGY AND EXCRETION**

Q.P. Code: 202019

Time : Three Hours

Maximum : 100 Marks

I. Essay Questions:

(2 x 15 = 30)

1. Describe the various lung volumes and capacities. Add a note on measurement of anatomical dead space.
2. Define shock. What are the causes and stages of shock? Add a note on circulatory arrest.

II. Short notes:

(10 x 5 = 50)

1. Renal tubular functions.
2. End stage renal disease.
3. Cystometrogram.
4. Describe diuretics and their mechanism of action.
5. Cardiac action potential.
6. Neural regulation of respiration.
7. Features of acclimatization to high altitudes.
8. Pacemaker and ectopic pacemaker.
9. The factors determining the diffusion capacity.
10. Circulatory adjustments at birth.

III. Reasoning Out:

(4 x 5 = 20)

1. Hyperkalemia has a potential effect on heart. Explain.
2. Polycythemia in obstructive sleep apnoea.
3. Application of Bernoulli's principle in dynamic of blood flow.
4. Splay in Glucose titration curve.
