

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 0522]

MAY 2022

Sub. Code: 2019

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 pressure and volume changes that occur during the cardiac cycle.
2. Describe the transport of oxygen from atmosphere to the tissues.

II. Short notes:

(10 x 5 = 50)

1. Tubulo glomerular feedback mechanism.
2. Urea transporters.
3. Transport maximum for (T_m) for glucose.
4. Set point for temperature control.
5. Mean QRS vector.
6. Influence of chemical factors on respiration.
7. Regulation of cerebral blood flow.
8. Circulatory changes during exercise.
9. Changes in lung volume, Alveolar pressure and pleural pressure during breathing.
10. The concept of physiologic shunt.

III. Reasoning Out:

(4 x 5 = 20)

1. The P_k value of phosphate buffer system is 6.8.
2. Subendocardial muscle frequently becomes infarcted.
3. Eddy currents are formed by turbulent blood flow.
4. Early distal tubule of the kidney is hypo-osmotic
