

PHYSIOLOGY**PAPER – II**

Time : 3 hours

PHY/D/17/36/II

Max. Marks : 100

Important instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

- a) Cardiovascular reflexes involved in regulation of blood pressure 7+3
 - b) Resetting of baroreceptors in chronic hypertension
- a) Pressure gradients and flow in coronary vessels during various phases of cardiac cycle 6+4
 - b) ECG findings and their physiological basis in ischemic heart disease.
- a) Systemic regulation of cardiovascular mechanisms by neurohumoral agents. 4+4+2
 - b) Triple Response
 - c) Endothelium-derived relaxing factor
- Alveolar ventilation and perfusion ratio (VA/Q) under following headings: 2+2+3+3
 - a) Definition and normal value
 - b) Effects of alteration in VA/Q ratio
 - c) Affects of gravity on it
 - d) Significance
- a) Physiological basis of problems which occur when an individual ascends back rapidly to sea level after sufficient exposure to high atmospheric pressure in deep sea. 6+4
 - b) What are the preventive and curative measures for the same?
- a) Carbon dioxide transport in blood 6+4
 - b) Effects of hypoxia and hydrogen ion concentration on CO₂ response curve

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7. Cardiac arrhythmias under following headings: 3+3+4
a) Types
b) Mechanism of development
c) ECG changes
8. Cardiovascular adjustments that occur in an untrained individual during moderate exercise. 10
9. a) Define functional residual capacity and give its normal value. 2+3+5
b) What is the significance of functional residual capacity?
c) Measurement of functional residual capacity.
10. a) Define hypoxia. 1+6+3
b) What are the different types of hypoxia and their causes?
c) Give the role of oxygen therapy in each type
