

PHYSIOLOGY

[HONOURS]

Course Code : PHYSIOL(H)-CC-T-10

Full Marks : 40

Time : 2½ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any **five** questions: $2 \times 5 = 10$
- a) What is meant by chloride shift?
 - b) Define Hering-Breuer reflex.
 - c) State the functions of pneumocytes.
 - d) What is hemothorax?
 - e) What do you understand by restrictive lung diseases? Give one Example.
 - f) What is asphyxia?
 - g) What is sleep apnea?
 - h) State the importance of FVC.
2. Answer any **two** questions: $5 \times 2 = 10$
- a) What is lung surfactant? Discuss the physiological functions of lung surfactant.
 $2 + 3 = 5$

- b) What is hypoxia? Discuss briefly different types of hypoxia. $1 + 4 = 5$
 - c) Describe the oxygen-haemoglobin dissociation curve. 5
 - d) Discuss briefly the peculiarities of pulmonary circulation. 5
3. Answer any **two** questions : $10 \times 2 = 20$
- a) Describe briefly the role of central and peripheral chemoreceptor in the regulation of respiration. 10
 - b) Discuss the process of transport of CO₂ from the tissues to lungs by the blood. 10
 - c) What do you understand by Physiological and anatomical dead space? Write a note on voluntary hyperpnoea. $5 + 5 = 10$
 - d) Discuss briefly the mechanics of breathing. What are the different types of artificial respiration? $7 + 3 = 10$