

## B.Sc. 4th Semester (Honours) Examination, 2019 (CBCS)

## Subject : Physiology

## Paper : CC-10

## (Respiration)

Time: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer *any five* questions: 2×5=10
- Write about the elasticity of lungs.
  - What is emphysema?
  - What is anatomical dead space?
  - Define pneumothorax.
  - What is maximum ventilatory volume?
  - Explain 'Henry's law' of gases.
  - Mention the anatomical differences between right and left lung.
  - What is acute respiratory distress syndrome?
2. Answer *any two* questions: 5×2=10
- How is intrapleural pressure created and why is it negative? 3+2=5
  - Give a brief idea about the role played by intercostal muscles in inspiration.
  - Discuss the histological layers of alveolar capillary membrane. What is diffusion capacity? 3+2=5
  - Outline the adaptive changes in respiratory system during high altitude acclimatization.
3. Answer *any two* questions: 10×2=20
- Discuss the mechanics of breathing with reference to the pressure volume curve of lung, chest wall and accessory respiratory structures. What is hysteresis loop? 8+2=10
  - Briefly explain the lung capacities and write their normal values. What is peak expiratory flow rate? 8+2=10
  - Outline the kinetics of oxygen binding of haemoglobin. Enlist the factors affecting oxygen haemoglobin binding capacity. 5+5=10
  - Classify hypoxia with their probable causes. What is Cyanosis? 8+2=10