

Chapter – 14 | Breathing and Exchange of Gases

QUIZ
PART-08

1. About 20–25% of CO_2 is transported by —
A. RBCs B. WBCs
C. Platelets D. Bone (A)

Explanation : CO_2 combines with haemoglobin in RBCs as carbamino-haemoglobin.

2. CO_2 combines with haemoglobin to form —
A. Oxyhaemoglobin
B. Carbamino-haemoglobin
C. Carboxyhaemoglobin
D. Bicarbonate only (B)

Explanation : CO_2 binds with haemoglobin to form carbamino-haemoglobin.

3. Carbamino-haemoglobin formation is favoured in tissues due to —
A. High pCO_2 and low pO_2
B. Low pCO_2 and high pO_2
C. High oxygen only
D. Low CO_2 only (A)

Explanation : Tissue conditions favour binding of CO_2 to haemoglobin.

4. In alveoli, CO_2 dissociates from carbamino-haemoglobin because of —
A. Low pCO_2 and high pO_2
B. High pCO_2 and low pO_2
C. No oxygen
D. No blood flow (A)

Explanation : Alveolar conditions promote release of CO_2 .

5. About 70% of CO_2 is transported as —
A. Bicarbonate
B. Oxyhaemoglobin
C. Nitrogen gas
D. Carbon monoxide (A)

Explanation : Most CO_2 is carried in blood as bicarbonate ions.

6. Carbonic anhydrase is found in high concentration in —
A. RBCs
B. Plasma only
C. Platelets only
D. Alveolar air (A)

Explanation : RBCs contain high carbonic anhydrase activity.

7. Carbonic anhydrase catalyzes conversion of CO_2 and water into —
A. Carbonic acid B. Oxygen
C. Glucose D. Urea only (A)

Explanation : CO_2 combines with H_2O to form H_2CO_3 under enzyme action.

8. Carbonic acid dissociates into —
A. H^+ and HCO_3^-
B. O_2 and H_2
C. CO and O_2
D. Na^+ and Cl^- (A)

Explanation : Carbonic acid breaks into hydrogen and bicarbonate ions.

9. About 7% of CO_2 is transported —
A. Dissolved in plasma
B. Bound to oxygen
C. In platelets
D. As nitrogen (A)

Explanation : A small fraction of CO_2 remains dissolved in plasma.

10. Every 100 ml of deoxygenated blood delivers about how much CO_2 to alveoli?
A. 2 ml B. 4 ml
C. 5 ml D. 10 ml (B)

Explanation : The PPT states that 100 ml deoxygenated blood delivers about 4 ml CO_2 to alveoli.