

Foundation Combined — only core Foundation content included.

Q1. Describe THREE adaptations of red blood cells for carrying oxygen.

[3 marks]

Q2. Describe the roles of the four components of blood.

[4 marks]

Total: 7 marks

Q1 (3 marks)

Describe THREE adaptations of red blood cells for carrying oxygen.

- Biconcave disc shape — large surface area for O_2 diffusion [1]
- No nucleus — more space for haemoglobin/more O_2 carried per cell [1]
- Contain haemoglobin — binds O_2 reversibly in lungs, releases in respiring tissues [1]

Q2 (4 marks)

Describe the roles of the four components of blood.

- Red blood cells: carry O_2 as oxyhaemoglobin [1]
- White blood cells: phagocytes engulf pathogens (phagocytosis); lymphocytes produce antibodies [1]
- Plasma: liquid that transports dissolved substances — glucose, CO_2 , hormones, urea, amino acids [1]
- Platelets: cell fragments involved in clotting at wound sites [1]