

NEET · CLASS 11 BIOLOGY

Body Fluids and Circulation — Revision Sheet

Human physiology is the largest scoring block in NEET Biology, and this chapter is where most students start. Try these questions and then take the full chapter test in the app.

Quick NCERT recap

- Blood plasma is about 55% of blood; formed elements (RBC, WBC, platelets) make up about 45%.
- RBC count is 5 to 5.5 million per mm³ and their lifespan is about 120 days.
- Clotting needs Ca²⁺, thrombokinase, prothrombin and fibrinogen; heparin is a natural anticoagulant.
- Cardiac output = stroke volume x heart rate, roughly 5 litres per minute in a healthy adult.
- The QRS complex in an ECG represents ventricular depolarisation.

Exam tips

- Learn the ECG waves and what each one shows — one question often comes from this alone.
- Remember which valves open and close at each stage of the cardiac cycle.
- Note the pacemaker order: SA node, AV node, bundle of His, Purkinje fibres.

Practice questions with answers

Q1. The pacemaker of the human heart is the:

- (A) AV node
- ✓ (B) SA node
- (C) Bundle of His
- (D) Purkinje fibres

Answer: (B) SA node

Why: The sino-atrial node in the right atrium generates the highest rate of action potentials (70 to 75 per minute) and so sets the heart rhythm.

Q2. The QRS complex of a normal ECG represents:

- (A) Atrial depolarisation
- ✓ (B) Ventricular depolarisation
- (C) Ventricular repolarisation
- (D) Atrial repolarisation

Answer: (B) Ventricular depolarisation

Why: The P wave is atrial depolarisation, the QRS complex is ventricular depolarisation (and the start of systole), and the T wave is ventricular repolarisation.

Q3. A person with blood group AB is called a universal recipient because their plasma:

- (A) Has both antibodies a and b
- ✓ (B) Has no antibodies against A or B antigens
- (C) Has only antibody a
- (D) Has no antigens on the RBC

Answer: (B) Has no antibodies against A or B antigens

Why: AB individuals have both A and B antigens on the RBC surface and no anti-A or anti-B antibodies in the plasma, so they can receive blood from any ABO group.

Q4. Which of these is a natural anticoagulant present in the human body?

- (A) Thrombin
- ✓ (B) Heparin
- (C) Fibrinogen
- (D) Prothrombin

Answer: (B) Heparin

Why: Heparin, released by mast cells and basophils, stops unwanted clotting inside blood vessels. Thrombin, fibrinogen and prothrombin are all part of the clotting pathway.

Revise this chapter on the right day

Study Commander AI reminds you to revise each topic on day 1, 3, 8 and 20, so you do not forget what you already learnt. Take the free 10-question test for this chapter:

<https://studycommanderai.live/practice/biology/body-fluids-and-circulation>

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