

Body Fluids and Circulation — CBSE Pattern Test 1

Class 11 Biology · 90 minutes · 40 marks · Sections A–D with answer key · Narayan Gurukul Academy

Test 1 — CBSE Pattern (90 minutes, 40 marks)

Class 11 Biology · Body Fluids and Circulation · Narayan Gurukul Academy (ClassApna)

General Instructions: (1) This paper has four sections — Section A (1×10), Section B (2×4), Section C (3×4) and Section D (5×2) — total 40 marks. Time allowed: 90 minutes.
(2) All questions are compulsory. No overall choice is given; internal choice, where allowed, is clearly marked.
(3) For MCQ questions choose the single correct option; for VSA answers write a single line.
(4) Take $g = 10 \text{ m/s}^2$. All symbols carry their usual meaning. Use of a calculator is not permitted.

Section A — MCQ & VSA ($10 \times 1 = 10$ marks)

1. Plasma without clotting factors is called
 - (A) serum
 - (B) lymph
 - (C) tissue fluid
 - (D) haemolymph
2. The most abundant plasma protein is
 - (A) albumin
 - (B) globulin
 - (C) fibrinogen
 - (D) haemoglobin
3. Lymph is also called
 - (A) tissue fluid
 - (B) serum
 - (C) plasma
 - (D) haemolymph
4. A person with blood group O has
 - (A) no A or B antigens
 - (B) both antigens
 - (C) only A antigen
 - (D) only B antigen
5. The enzyme that converts fibrinogen to fibrin is
 - (A) thrombin
 - (B) pepsin
 - (C) amylase
 - (D) catalase
6. The human heart has
 - (A) four chambers
 - (B) two chambers
 - (C) three chambers
 - (D) five chambers
7. The pacemaker of the heart is the
 - (A) SA node

- (B) AV node
 - (C) Purkinje fibres
 - (D) bundle of His
8. High blood pressure is called
- (A) hypertension
 - (B) hypotension
 - (C) angina
 - (D) thrombosis
9. What is serum?
10. What is coagulation?

Section B — Short Answer I ($4 \times 2 = 8$ marks)

11. What type of tissue is blood?
12. Who discovered the ABO blood group system?
13. Name the protein that forms the clot.
14. How many chambers does the human heart have?

Section C — Short Answer II ($4 \times 3 = 12$ marks)

15. State two functions of blood.
16. State two functions of lymph.
17. Explain the ABO blood group system.
18. State the steps of blood clotting.

Section D — Long Answers ($2 \times 5 = 10$ marks)

19. (a) Describe the composition of blood. (b) Describe the structure of the human heart.
20. (a) Describe the ABO and Rh blood grouping systems. (b) Explain double circulation with a schematic.

Answer Key (Marking Scheme)

- Q1 — (A) serum. Q2 — (A) albumin. Q3 — (A) tissue fluid. Q4 — (A) no A or B antigens. Q5 — (A) thrombin. Q6 — (A) four chambers. Q7 — (A) SA node. Q8 — (A) hypertension.
- Q9 — Serum is plasma without the clotting factors.
- Q10 — Coagulation is the process of forming a blood clot.
- Q11 — A fluid connective tissue.
- Q12 — Karl Landsteiner.
- Q13 — Fibrin.
- Q14 — Four.
- Q15 — Transport of oxygen/nutrients and defence (also temperature regulation).
- Q16 — Returns tissue fluid to the blood and transports fats.
- Q17 — Based on A and B antigens and antibodies: A (A antigen, anti-B), B (B antigen, anti-A), AB (both antigens), O (no antigens).
- Q18 — Platelets release factors; prothrombin to thrombin; fibrinogen to fibrin; clot forms.

Q19 — (a) Plasma (~55%) with albumin, globulins, fibrinogen plus RBCs, WBCs, platelets. (b) Four chambers with valves and the SA node.

Q20 — (a) ABO (A/B antigens and antibodies) and Rh (D antigen, Rh+/Rh-). (b) Pulmonary (heart–lungs) and systemic (heart–body) circulation.