

9.1 Circulatory systems

Name: _____ Class: _____ Date: _____ **Total: 8 marks**

KEY WORDS circulatory system 循环系统 • heart 心脏 • mammal 哺乳动物 • oxygen 氧气
• blood vessels 血管

Objective

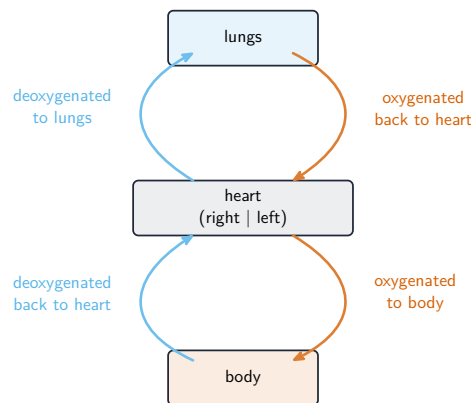
Build the skills to answer exam questions on **circulatory systems** 循环系统 — the parts of the system and **single vs double circulation** 单循环/双循环.

You must be able to:

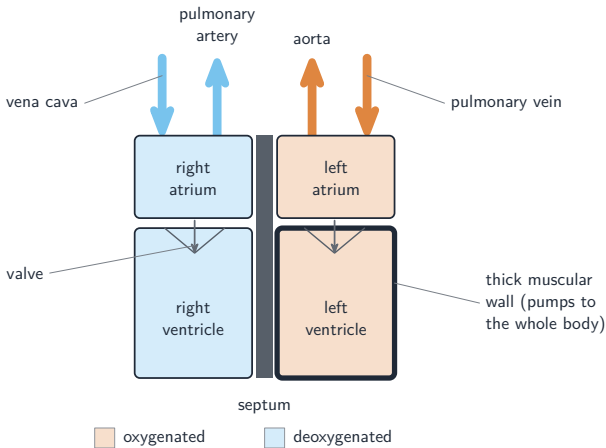
- name the parts of the circulatory system
- compare single and double circulation
- explain the advantage of a double circulation

1 Worked examples

■ Double circulation



Mammals have a double circulation — blood passes through the heart twice each trip



The heart pumps the double circulation

- **system:** a pump (heart), blood vessels, valves (one-way flow).
- **advantage:** blood is re-pumped at high pressure before going to the body → fast oxygen delivery.

2 Practice

2.1 Name the three parts of the circulatory system. [3]

2.2 State how many times blood passes through the heart in a single circulation. [1]

3 Exam-style questions

3.1 In a double circulation, blood passes through the heart: [1]

- **A** once per trip
 - **B** twice per trip
 - **C** never
 - **D** four times per trip
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3.2 Mammals have a double circulation.

(a) State the advantage of a double circulation. [2]

(b) State the job of the valves in the circulatory system. [1]

Solutions

2.1 a pump (heart); blood vessels; valves.

2.2 once.

3.1 B. In a double circulation blood passes through the heart twice per trip.

3.2 (a) blood can be pumped again at high pressure before going to the body; so it travels faster and delivers oxygen quickly.

(b) they keep the blood flowing one way only.