

QB365 Question Paper Software
11th Standard - Biology

Body Fluids and Circulation Assertion and reason

Exam Time: 00:20 Hrs

Date: 2025-10-10

Total Marks: 10

Questions:

Assertion and reason

1. **Assertion (A):** Portal system consists of veins which start from capillaries and end into capillaries.

Reason (R): The hepatic portal vein carries deoxygenated blood from intestine to liver before it is delivered to the systemic circulation.

Codes:

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A).
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A).
- (3) (A) is true but (R) is false.
- (4) Both (A) and (R) are false.

2. **Assertion (A):** Atherosclerosis affects the vessels that supply blood to the heart muscle.

Reason (R): It is caused by deposits of calcium, fat, cholesterol and fibrous tissue which makes the lumen of arteries narrower.

Codes:

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A).
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A).
- (3) (A) is true but (R) is false.
- (4) Both (A) and (R) are false.

3. **Assertion (A):** The cardiac output of an athlete will be much higher than that of an ordinary man.

Reason (R): The body has the ability to alter the stroke volume as well as the heart rate and thereby the cardiac output.

Codes:

- (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A).
- (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A).
- (3) (A) is true but (R) is false.
- (4) Both (A) and (R) are false.

4. **Assertion :** Lub is a heart sound which is produced during each cardiac cycle.

Reason : It is associated with the closure of the tricuspid and bicuspid valves.

Codes:

- (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
- (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
- (c) If Assertion is true but Reason is false.
- (d) If both Assertion and Reason are false.

5. **Assertion (A) :** Closed circulatory system is considered to be more advantageous.

Reason (R) : Flow of fluid can be more precisely regulated in this system.

Codes:

- a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- b) Both (A) and (R) are true and (R) is not the correct explanation of (A)
- c) (A) is true but (R) is false
- d) Both (A) and (R) are false

6. **Assertion (A):** The heart of humans is called myogenic.

Reason (R): Normal activities of the heart are auto regulated by specialised cardiac musculature called the nodal tissue.

Codes:

- a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- b) Both (A) and (R) are true and (R) is not the correct explanation of (A)
- c) (A) is true but (R) is false
- d) Both (A) and (R) are false

7. **Assertion (A):** Edema can be observed in the legs of pregnant women.

Reason (R): Capillary hydrostatic pressure is increased as the enlarged uterus exerts pressure on the abdominal veins in pregnant women.

Codes:

- a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- b) Both (A) and (R) are true and (R) is not the correct explanation of (A)
- c) (A) is true but (R) is false
- d) Both (A) and (R) are false

8. **Assertion (A):** Calcium ion removers such as citrates Oxalates of sodium are added to blood to store blood in blood banks.

Reason (R): Calcium ions play an important role in both extrinsic and intrinsic pathways of cascade reactions.

Codes:

- a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- b) Both (A) and (R) are true and (R) is not the correct explanation of (A)
- c) (A) is true but (R) is false
- d) Both (A) and (R) are false

9. **Assertion(A):** Bulging of cusps, of A-V valves too far into atria is prevented during ventricular systole.

Reason (R): In the heart, chordae tendineae connect A-V valves with papillary muscles.

Codes:

- a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- b) Both (A) and (R) are true and (R) is not the correct explanation of (A)
- c) (A) is true but (R) is false
- d) Both (A) and (R) are false

10. **Assertion (A):** Heart failure is sometimes called congestive heart failure.

Reason (R): Vasoconstriction increases blood pressure.

Codes:

- a) Both (A) and (R) are true and (R) is the correct explanation of (A)
- b) Both (A) and (R) are true and (R) is not the correct explanation of (A)
- c) (A) is true but (R) is false
- d) Both (A) and (R) are false

Answers Key:

Assertion and reason

1. (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A).
2. (2) Both (A) & (R) are true but the (R) is not the correct explanation of the (A).
3. (1) Both (A) & (R) are true and the (R) is the correct explanation of the (A).
4. (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
5. a) Both (A) and (R) are true and (R) is the correct explanation of(A)
6. a) Both (A) and (R) are true and (R) is the correct explanation of(A)
7. a) Both (A) and (R) are true and (R) is the correct explanation of (A)
8. a) Both (A) and (R) are true and (R) is the correct explanation of (A)
9. a) Both (A) and (R) are true and (R) is the correct explanation of (A)
10. b) Both (A) and (R) are true and (R) is not the correct explanation of (A)

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