

Homework

Q1) Discuss the advantages and disadvantages of a closed circulatory system.

ans. Advantages:-

- * It is efficient in delivering oxygen throughout an organism
- * It provides more power in the form of pressure.

Disadvantages:-

- * It is more complex than the open circulatory system
- * It requires more energy for blood distribution.

22. The digestive systems of humans is intermediate between that of strict carnivores and that of strict herbivores. How might you expect your digestive system to be different if we had fed exclusively on plant tissues throughout our evolutionary history.

ans - Humans have a digestive system which is capable of digesting both plant and animal products. If we had fed exclusively on plant tissues throughout then our digestive system would have been very similar to that of herbivores. Herbivores have teeth that are highly specialised for eating plants. Because plant matter is often difficult to break down, the molars of herbivores are wider and flatter. Most of the herbivores lack canines. Since, the food habit of herbivores mostly contains cellulose, our digestive would have been catered more specifically for breaking down cellulose. We would have a longer digestive system in order to thoroughly break down plant matter. The caecum (blind sac) would have been well developed with appendix being no more vestigial.

Q. Explain why we become warm during exercise and the usefulness of shivering when it is cold.

ans - Body heat is increased with exercise because body is being active, our heart rate is increasing, and the result is our body will sweat which is our way of cooling ourselves down. Shivering helps the body warm itself. When we shiver, our muscles contract and relax in rapid succession, and all those little movements can create heat. It's an involuntary response to prevent consequences of a chilled core.

Q. (a) The loss of water vapor by a plant is called transpiration.
- True

(b) Translocation is the transportation of the products of photosynthesis - True

(c) Stretching of inner wall of guard cells, open the stomata
- False

(d) Arteries are the widest blood vessels - False

(e) Bowman's capsule is found in the heart - False