

HW  
01/07/21

# HOME ASSIGNMENT

## Life Processes

1. Discuss the advantages and disadvantages of a closed circulatory system.

Ans- Advantages :-

- Blood travels faster in a closed system thus  $O_2$ , nutrients & wastes travel faster too. Thus transport of  $O_2$  is efficient.
- The closed circulatory system operate with much higher blood pressure, which is efficient.
- Due to efficient distribution of antibody immune responses are stronger, helping the body to fight off infection more efficiently.

Disadvantages :-

- It requires much blood pressure and more energy for distribution and thus is not suited for animals with slower metabolism & smaller bodies.
- The closed circulatory system is more complex than open circulatory system.



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

Ans - \* The digestive system of human beings is intermediate between herbivores and carnivores.

\* So, the digestive system in human beings would have certain features:-

(i) The teeth of herbivores are flatter and have apparently less sharpness to them in comparison to carnivores who have pointed teeth for tearing flesh. Therefore, the teeth of human beings would be more like herbivores rather than having sharp canines.

(ii) The carnivores animals have more acidic stomach for better digestion of proteins than herbivores. So, humans eating only plant product would have less acidic in their stomach.



(iii) Certain herbivores have special bacteria in their gut for digesting cellulose out of plant goods. This might have been present in humans before evolving into omnivores.

(iv) Herbivores process energy from the plant products that they eat & carnivores get the energy from herbivores. So it is less.

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

Ans- Our body needs to keep a core temperature of about  $98.6^{\circ}\text{F}$ . To prevent hypothermia and other consequences of a chilled core, our brain monitors temperature very closely. If the surface of our skin gets too chilly, skin receptors send signals to the brain, which sets into motion a series of warming tricks.

4. state whether true or false. (11)

a. The loss of water vapour by a plant is called transpiration. **False.**

b. Translocation is the transportation of the products of photosynthesis. **True**

c. stretching of inner wall of guard cells, open the stomata. **True**

d. Arteries are the widest blood vessels. **True**

e. Bowman's capsule is found in the heart. **False**

