

Chapter - 6

Life Processes

(Assertion and Reasoning Questions)

Following questions consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

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

Q.1. Assertion (A) : Plants lack excretory organs.

Reason (R) : Plants usually absorb essential nutrients.

Q.2. Assertion (A) : In anaerobic respiration, one of the end product is alcohol.

Reason (R) : There is an incomplete breakdown of glucose.

Q.3. Assertion (A) : In plants there is no need of specialised respiratory organs.

Reason (R) : Plants do not have great demands of gaseous exchange.

Q.4. Assertion (A) : Bile is essential for digestion of lipids.

Reason (R) : Bile juice contains enzymes.

Q.5. Assertion (A) : Carbohydrate digestion mainly takes place in small intestine.

Reason (R) : Pancreatic juice contains the enzyme lactase.

Q.6. Assertion (A) : Aerobic respiration requires less energy as compared to anaerobic respiration.

Reason (R) : Mitochondria is the powerhouse of the cell.

Q.7. Assertion (A): Arteries are thick-walled and elastic in nature.

Reason (R) : Arteries have to transport blood away from the heart.

Q.8. Assertion (A) : Human heart is four-chambered.

Reason (R) : Vena cava is the only artery that supplies deoxygenated blood to the heart.

Q.9. Assertion (A): Energy is required to carry out different life processes.

Reason (R) : Energy is obtained in the form of ATP in the mitochondria.

Q.10. Assertion (A): Rings of cartilage are present in the throat,

Reason (R) : These ensure that the air-passage does not collapse

Q.11. Assertion (A): Pyruvate is a six-carbon molecule

Reason (R) : It is prepared in the cytoplasm as the first step to cellular respiration

Q.12. Assertion (A): Molecular movements are needed for life.

Reason (R): Body structures made up of these molecules need continuous repair and maintenance

Q.13. Assertion (A): Diffusion does not meet high energy requirements of multi-cellular organisms

Reason (R) : Diffusion is a fast process but occurs at the surface of the body.

Q.14. Assertion (A): The opening and closing of the pore is a function of the guard cells.

Reason (R) : Stomatal pores are the site for exchange of gases by diffusion.

Q.15. Assertion (A): The purpose of making urine is to filter out undigested food from intestine

Reason (R): Kidneys filter the waste and produce urine,

Q.16. Assertion (A): The inner lining of the small intestine has numerous finger-like projections called villi.

Reason (R) : The villi increase the surface area for absorption.

Q.17. Assertion (A): In human beings, the respiratory pigment is haemoglobin

Reason (R) : It is a type of protein which has high-affinity carbon dioxide.

Q.18. Assertion (A): The plants store some of the waste products in their body parts.

Reason (R) : Raphides are the solid waste products of plants.

Q.19. Assertion (A): The movement of water and dissolved salts in xylem is always upwards.

Reason (R) : 'The upward movement of water is due to low pressure created by transpiration.

Q.20. Assertion (A): Photosynthesis takes place in green parts of the plants.

Reason (R) : Photosynthesis always takes place in leaves.

Q.21. Assertion: The average number of heart beat of a person at rest is about 80 per minute.

Reason (R) : One contraction and relaxation of the heart constitutes a complete heart beat.

Q.22. Assertion (A): Ureters are the tubes which carry urine from kidneys to the bladder.

Reason (R) : Urine is stored in the urethra.

Q.23. Assertion (A): Ventricles have thicker walls than auricles.

Reason (R) : Ventricles have to pump blood into various organs with great pressure

Q.24. Assertion (A): Capillaries are the thinnest blood vessels.

Reason (R) : Capillaries connect the branches of arteries and veins.

Q.25. Assertion (A): Blood takes up oxygen from the alveolar air and release CO₂ during exchange.

Reason (R) : 'The concentration of O₂ is more in alveolar air.

Q.26. Assertion: The large intestine is the largest part of the alimentary canal.

Reason (R) : Tiger has a shorter small intestine, than herbivores.

Q.27. Assertion (A): Most of the living organisms carry out aerobic respiration.

Reason (R) : Mitochondria is the site of aerobic respiration in the cell.

Q.28. Assertion (A): The Bowman's capsule and the tubule together make a nephron.

Reason (R) : The function of tubule is to allow the selective reabsorption of substances like glucose, amino acids, urea, salts and water into the blood capillaries.

Q.29. Assertion (A): Pancreatic juice digests starch, proteins and fats.

Reason (R) : Pancreatic juice contains digestive enzymes like pancreatic amylase, trypsin and lipase.

Q.30. Assertion (A): The accumulation of lactic acid in the muscles causes muscle cramps.

Reason (R) : During vigorous physical exercise leg muscles respire anaerobically.

Q.31. Assertion (A): Phloem helps in translocation of food from the leaves.

Reason (R) : Phloem provides mechanical support to plant.

Q.32. Assertion (A): Trachea does not collapse, when there is no air in it.

Reason : Trachea is supported by cartilage.-X-X-X-

ANSWER KEY

Q.1 : (b)	Q.2 : (a)	Q.3 : (a)	Q.4 : (c)
Q.5 : (c)	Q.6 : (d)	Q.7 : (b)	Q.8 : (c)
Q.9 : (a)	Q.10 : (a)	Q.11 : (d)	Q.12 : (a)
Q.13 : (c)	Q.14 : (b)	Q.15 : (d)	Q.16 : (a)
Q.17 : (c)	Q.18 : (b)	Q.19 : (a)	Q.20 : (c)
Q.21 : (d)	Q.22 : (c)	Q.23 : (a)	Q.24 : (b)
Q.25 : (b)	Q.26 : (d)	Q.27 : (b)	Q.28 : (c)
Q.29 : (a)	Q.30 : (a)	Q.31 : (c)	Q.32 : (a)