

1. Which fact about proteins makes them essential components of the human diet?

- A. They are an energy source.
- B. They are used in synthesizing hormones.
- C. They can be stored as a food reserve.
- D. They provide amino acids for cell growth.

2. Active transport is:

- A. when the water moves in transpiration stream.
- B. when ions move in blood plasma.
- C. when glucose molecules move down a concentration gradient.
- D. when glucose move into the cells of villi

3. Adrenaline helps to;

- A. take up glucose by liver.
- B. decrease the rate of peristalsis in the ileum.
- C. decrease respiration.
- D. convert glycogen into glucose.

4. When oxygen is absent, the process that takes place in a root hair cell is:

	1	2
A.	active transport	plasmolysis
B.	osmosis	diffusion
C.	active transport	osmosis
D.	diffusion	active transport

5. Which process can only occur through a membrane?

- A. Active transport, diffusion and osmosis.
- B. Active transport and Diffusion
- C. Active transport and Osmosis.
- D. Diffusion and Osmosis.

6. Red blood cells were placed in a concentrated salt solution. Which of the following describes what will happen to the cells?

	Direction of water movement	Effect on the RBCs
A.	Into the cell	Slight \uparrow in size of cells
B.	Into the cell	Cells burst
C.	Out of the cell	Slight \downarrow in the size of cells
D.	Out of the cell	No change in volume of cells

7. The enzyme amylase breaks down starch into maltose. According to 'Lock and Key' hypothesis which is the lock and which is the key?

	Key	Lock
A.	Amylase	Maltose
B.	Starch	Amylase
C.	Amylase	Starch
D.	Starch	Maltose

8. The Optimum temp and pH for enzymes in human body cells are;

- A. 10 °C and pH = 1
- B. 20 °C and pH = 4
- C. 37 °C and pH = 7
- D. 48 °C and pH = 10

9. The pH in the mouth decreases after eating. Which statement explains the decrease in pH?

- A. Bacteria release acids when respiring food substances.
- B. Enzymes in saliva release acids during digestion.
- C. Food substances become alkaline when chewed.
- D. Salivary glands release an alkaline solution.

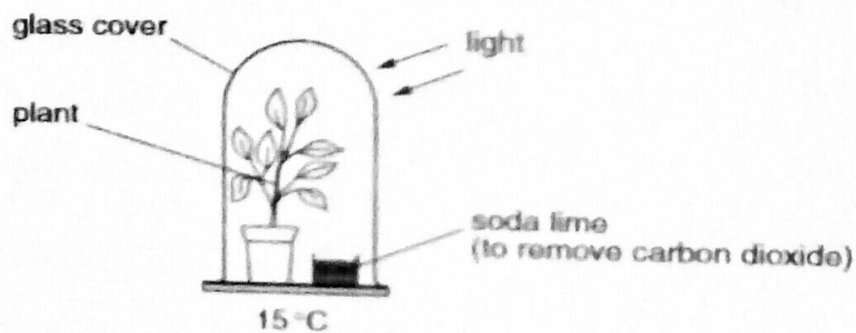
10. Large, insoluble molecules have to be digested before they can be;

- A. absorbed
- B. assimilated.
- C. egested.
- D. ingested.

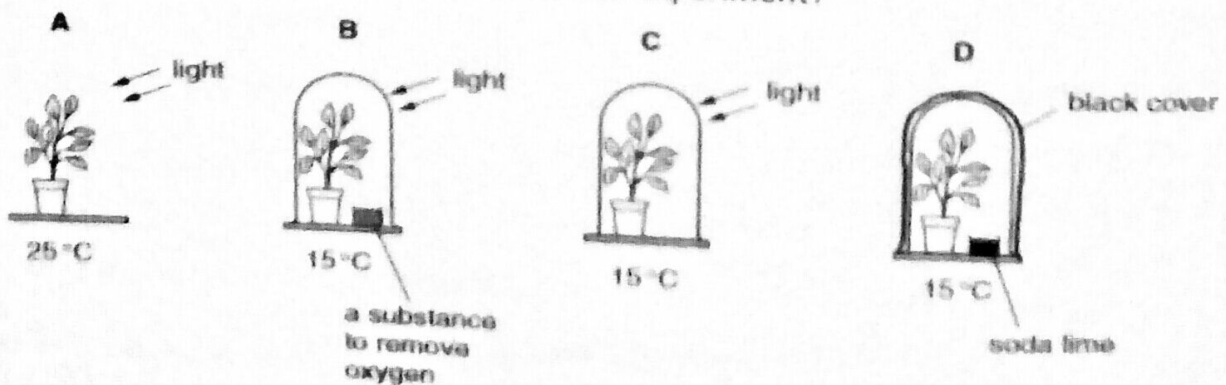
11. What is the correct route for blood flow in a human?

- A. left atrium → left ventricle → lungs → right ventricle → right atrium
- B. left atrium → left ventricle → right ventricle → right atrium → lungs
- C. right atrium → right ventricle → left ventricle → left atrium → lungs
- D. right atrium → right ventricle → lungs → left atrium → left ventricle

12. The diagram shows an experiment to find out whether carbon dioxide is needed for photosynthesis.



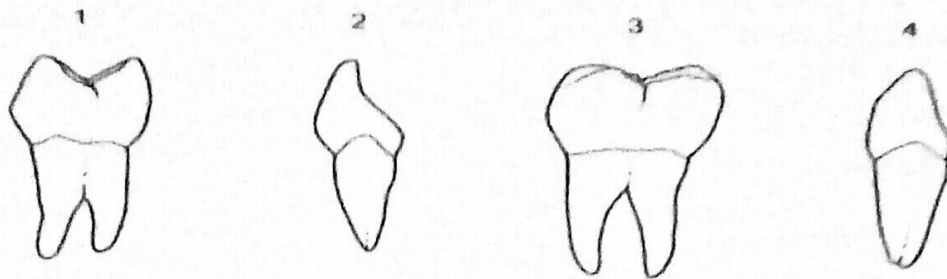
Which is the most suitable control for this experiment?



13. Where in the alimentary canal is most water absorbed?

- A. Colon
- B. Ileum
- C. Oesophagus
- D. Stomach

14. Which of these human teeth are used for grinding?



- A. 1 and 3
- B. 1 and 4
- C. 2 and 3
- D. 2 and 4

15. In each villus, fats is transported through;

- A. lymphatic capillary
- B. blood vessels
- C. microvilli
- D. all of these

16. Aphids feed on plant juices through their;

- A. penetrators
- B. sharp claws
- C. proboscis
- D. long beaks

17. Holozoic nutrition refers to;

- A. cooking ones own food
- B. producing ones own food
- C. to get nutrition from food
- D. to feed on readymade complex organic food

18. Blood from various parts of body is returned to the;

- A. right ventricle
- B. right atrium
- C. left ventricle
- D. left atrium

19. Artery leaving from left ventricle of heart is;

- A. pulmonary artery
- B. aortic arch
- C. inferior vena cava
- D. posterior vena cava

20. Oxygenated blood;

- A. leaves from left side of heart
- B. leaves from right side of heart
- C. does not leave lungs
- D. enters lungs from heart

21. Pulmonary circulation links;

- A. blood from pulmonary arteries to pulmonary veins
- B. blood from pulmonary veins to pulmonary arteries
- C. blood from lungs to heart
- D. blood in closed circulation system

22. Systematic circulation;

- A. carry blood to left side of heart
- B. carry blood to right side of heart
- C. oxygenated blood from lungs to heart
- D. red oxygenated blood

23. Salivary and pancreatic amylase help digest;

- A. proteins
- B. starch
- C. fats
- D. minerals

24. Enzyme action depends upon;

- A. active site
- B. available site
- C. recognizable site
- D. detachable site

25. Obesity results if;

- A. energy intake is lesser than energy expenditure
- B. number of enzymes becomes more than food
- C. energy expenditure is less than energy intake
- D. energy expenditure is more than energy intake

26. Left atrium receives blood from the;

- A. pulmonary veins
- B. two vena cava
- C. right ventricle
- D. left ventricle

27. Special kind of protein containing iron is called as;

- A. hormones
- B. hemoglobin
- C. red blood cell
- D. white blood cell

28. Red blood cells (RBCs);

- A. have nucleus
- B. can repair damage through new protoplasm
- C. are destroyed in spleen
- D. are permanent cells

29. Tubular outgrowth of an epidermal cell is also called as;

- A. branch
- B. stem
- C. root hair
- D. petiole

30. Mature sieve tube cell;

- A. loses its central nucleus
- B. loses its central vacuoles
- C. cell walls become fully permeable
- D. cell wall becomes impermeable