

RAVI MATHS TUITION CENTER , CHENNAI- 82. WHATSAPP - 8056206308

Life Processes T1

10th Standard

Science

20 x 1 = 20

- 1) The kidneys in human beings are a part of the system for
(a) Nutrition (b) Respiration (c) Excretion (d) Transportation
- 2) The xylem in plants is responsible for
(a) Transport of water (b) Transport of food (c) Transport of amino acids (d) Transport of oxygen
- 3) The autotrophic mode of nutrition requires
(a) Carbon dioxide and water (b) Chlorophyll (c) Sunlight (d) All of the above
- 4) The breakdown of pyruvate to give carbon dioxide, water and energy takes place in
(a) Cytoplasm (b) Mitochondria (c) Chloroplast (d) Nucleus
- 5) In salivary amylase is lacking in the saliva which of the following events in the mouth cavity will be affected?
(a) Proteins breaking down into amino acids (b) Starch breaking down into sugars
(c) Fats breaking down into fatty acids and glycerol (d) Absorption of vitamins
- 6) Choose the function of the pancreatic juice from the following
(a) trypsin digests proteins and lipase carbohydrates
(b) trypsin digests emulsified fats and lipase proteins (c) trypsin and lipase digest food
(d) trypsin digests proteins and lipase emulsified fats
- 7) Which is the correct sequence of air passage during inhalation?
(a) Nostrils → larynx → pharynx → trachea → lungs
(b) Nasal passage → trachea → pharynx → larynx → alveoli
(c) Larynx → nostrils → pharynx → lungs
(d) Nostrils → pharynx → larynx → trachea → alveoli
- 8) In which of the following vertebrate group/groups, heart does not pump oxygenated blood to different parts of the body?
(a) Pisces and amphibians (b) Amphibians and reptiles (c) Amphibians only (d) Pisces only
- 9) Which of the following is an incorrect statement?
(a) Organisms grow with time (b) Organisms must repair and maintain their structure
(c) Movement of molecules does not take place among cells (d) Energy is essential for life processes
- 10) Choose the form in which most plants absorb nitrogen
(i) Proteins
(ii) Nitrates and Nitrites
(iii) Urea
(iv) Atmospheric nitrogen
(a) (i) and (ii) (b) (ii) and (iii) (c) (iii) and (iv) (d) (i) and (iv)
- 11) During deficiency of oxygen in tissues of human beings, pyruvic acid is converted into lactic acid in the
(a) Cytoplasm (b) Chloroplast (c) Mitochondria (d) Golgi body
- 12) Green dots present on a leaf are cell organelles called
(a) Chlorophyll (b) Chloroplast (c) Stomach (d) Veins
- 13) Amphibians have
(a) 1-chambered heart (b) 2-chambered heart (c) 3-chambered heart (d) 4-chambered heart

- 14) The process sufficient to meet the oxygen requirement of unicellular organisms is
 (a) Respiration (b) Diffusion (c) Oxidation (d) All of these
- 15) Heterotroph's survival depends _____ on autotrophs.
 (a) Directly (b) Indirectly (c) Directly and Indirectly (d) Directly or Indirectly
- 16) Photosynthesis is a
 (a) Catabolic process (b) Parabolic process (c) Amphibolic process (d) Photochemical process
- 17) Organisms which breakdown the food outside the body and then absorb it are
 (a) Bread moulds (b) Yeast (c) Mushroom (d) All of these
- 18) Bile juice is secreted by
 (a) Stomach (b) Pancreas (c) Small intestine (d) Liver
- 19) CO₂ is transported in our body through
 (a) Haemoglobin (b) Blood (c) Water (d) All of these
- 20) Lymph carries
 (a) Digested food (b) Absorbed food (c) Digested and absorbed food (d) Water

5 x 1 = 5

21) **Assertion:** Nitrogen is an essential element used in the synthesis of proteins and other compounds in plants.

Reason: Plants take in nitrogen in the form of inorganic nitrates or nitrites.

Codes

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

22) **Assertion:** Oxygen is more readily soluble in water than carbon dioxide.

Reason: Hence it gets transported easily through blood.

Codes

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

23) **Assertion:** Blood takes up oxygen from the alveolar air and release CO₂ during exchange.

Reason: The concentration of O₂ is more in alveolar air.

Codes

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

24) **Assertion:** The accumulation of lactic acid in the muscles causes muscle cramps.

Reason: During vigorous physical exercise leg muscles respire anaerobically.

Codes

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

25) **Assertion:** Ventricles have thicker walls than auricles.

Reason: Ventricles have to pump blood into various organs with great pressure.

Codes

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

5 x 2 = 10

- 26) Why is diffusion insufficient to meet the oxygen requirements of multicellular organisms like humans?
- 27) What is the function of digestive enzymes?
- 28) What is the role of saliva in the digestion of food?
- 29) How do autotrophs obtain CO_2 and N_2 to make their food?
- 30) Why do herbivores have longer, small intestine than carnivores?

6 x 3 = 18

- 31) What criteria do we use to decide whether something is alive?
- 32) In mammals and birds why is it necessary to separate oxygenated and de-oxygenated blood
- 33) How are oxygen and carbon dioxide transported in human beings? How are lungs designed to maximize the area for exchange of gases?
- 34) Write the functions of the following in the digestive process:
- (i) Bile
 - (ii) Bicarbonate secreted by the duodenum
 - (iii) Pancreatic amylase
- 35) (a) Name the site of exchange of material between the blood and surrounding cells
- (b) Draw a schematic representation of transport and exchange of oxygen and carbon dioxide in human body
- 36) Name the excretory organs of the human excretory system. Show all the organs with a labelled diagram.

