



BIOLOGY

BOOKS - NCERT BIOLOGY (ENGLISH)

LIFE PROCESSES

Multiple Choice Questions Mcqs

1. Which of the following statements about the autotrophs is incorrect?
- A. They synthesise carbohydrates from carbon dioxide and water in the presence of sunlight and chlorophyll
 - B. They store carbohydrates in the form of starch
 - C. They carbon dioxide and water into carbohydrates in the absence of sunlight
 - D. They constitute the first trophic level in food chains

Answer: C



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2. In which of the groups of organisms the food material is broken down outside the body and then absorbed ?

A. Mushroom , green plants , Amoeba

B. Yeast, mushroom mould

C. Paramecium ,Amoeba, Cuscuta

D. Cuscuta, lice,tapeworm

Answer: B



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3. Select the correct statement

- A. Heterotrophs do not synthesise their own food
- B. Heterotrophs utilise solar energy for photosynthesis
- C. Heterotrophs synthesis their own food
- D. Heterotrophs are capable of converting carbon dioxide and water into carbohydrates

Answer: a



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4. Which is the correct sequence of parts in human alimentary canal?

- A. Mouth → Stomach → Small intestine → Oesophagus → Large intestine
- B. Mouth → Oesophagus → Stomach → Large intestine → Small intestine

C. Mouth → Stomach → Oesophagus → Small intestine →

Large intestine

D. Mouth → Oesophagus → Stomach → Small intestine →

Large intestine

Answer: d



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5. If 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

Answer: B

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6. The inner lining of stomach is protected by one of the following from hydrochloric acid. Choose the correct one

- A. Pepsin
- B. Mucus
- C. Salivary amylase
- D. Bile

Answer: B

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7. Which part of alimentary canal receives bile from the liver?

- A. Stomach
- B. Small intestine

C. Large intestine

D. Oesophagus

Answer: B



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8. A few drops of iodine solution were added to rice water. The solution turned blue-black in colour. This indicates that rice water contains

A. complex proteins

B. simple proteins

C. fats

D. starch

Answer: D



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9. In which part of the alimentary canal food is finally digested?

- A. Stomach
- B. Mouth cavity
- C. Large intestine
- D. Small intestine

Answer: D



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10. 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 fats
- D. Trypsin digests proteins and lipase emulsified fats

Answer: D

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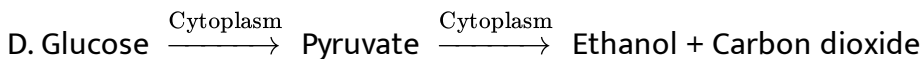
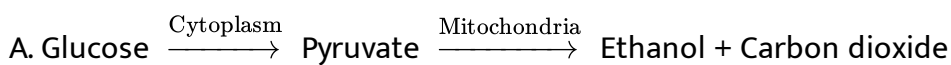
11. When air is blown from mouth into a test - tube containing lime water, the lime water turned milky due to the presence of

- A. oxygen
- B. carbon dioxide
- C. nitrogen
- D. water vapour

Answer: B

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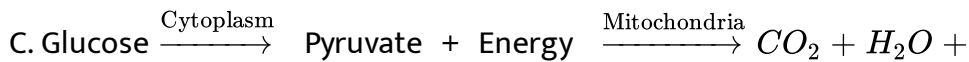
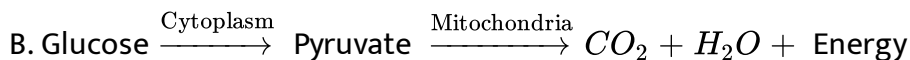
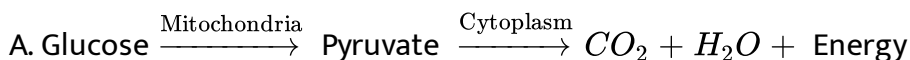
12. The correct sequence of anaerobic reactions in yeast is



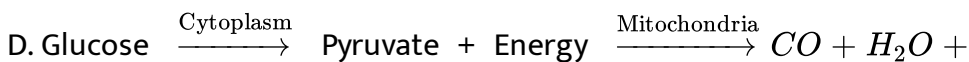
Answer: D

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13. Which of the following is most appropriate for aerobic respiration ?



Energy



Energy

Answer: B



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14. Which of the following statements are true about respiration ?

- (i) during inhalation, ribs move inward and diaphragm is raised
- (ii) the gaseous exchange takes place in the alveoli
- (iii) haemoglobin has greater affinity for carbon dioxide than oxygen
- (iv) alveoli increase surface area for the exchange of gases

A. (i) and (iv)

B. (ii) and (iii)

C. (i) and (iii)

D. (ii) and (iv)

Answer: D



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15. 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

Answer: d



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16. During respiration exchange of gases take place in

- A. trachea and larynx
- B. alveoli of lungs
- C. alveoli and throat
- D. throat and larynx

Answer: B



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17. Which of the following statement (s) is (are) true about heart?

(i) Left atrium receives oxygenated blood from different parts of body while right atrium receives deoxygenated blood from lungs

(ii) Left ventricle pumps oxygenated blood to different body parts while right ventricle pumps deoxygenated blood to lungs

(iii) Left atrium transfers oxygenated blood to right ventricle which sends it to different body parts

(iv) Right atrium receives deoxygenated blood from different part of the body while left ventricle pumps oxygenated blood to different parts of the body

A. (i)

B. (ii)

C. (ii) and (iv)

D. (i) and (iii)

Answer: C



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18. What prevents backflow of blood inside the heart during contraction ?

- A. Valves in heart
- B. Thick muscular walls of ventricles
- C. Thin walls of atria
- D. All of these

Answer: A



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19. Single circulation ,i.e, blood flows through the heart only once during one cycle of passage through the body, is exhibited by

- A. Labeo , Chameleon , Salamander
- B. Hippocampus , Exocoetus , Anabas
- C. Hyla, Rana,Draco
- D. whale,dolphin,turtle

Answer: b



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20. 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

Answer: D



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21. Choose the correct statement that describes arteries.

- A. They have thick elastic walls, blood flows under high pressure , collect blood from different organs and bring it back to the heart
- B. They have thin walls with valves inside, blood flows under low pressure and carry blood away from the heart to various organs of the body
- C. They have thick elastic walls,blood flows under low pressure carry blood from the heart to various of the body
- D. They have thick elastic walls without valves inside , blood flows under high pressure and carry blood away from the heart to

different parts of the body .

Answer: D



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22. The filtration units of kidneys are called

- A. ureter
- B. urethra
- C. neurons
- D. nephrons

Answer: D



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23. Oxygen liberated during photosynthesis comes from

A. water

B. chlorophyll

C. carbon dioxide

D. glucose

Answer: A



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24. The blood leaving the tissues becomes richer in

A. carbon dioxide

B. water

C. hemoglobin

D. oxygen

Answer: A



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25. 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

Answer: c



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26. The internal (cellular) energy reserve in autotrophs is

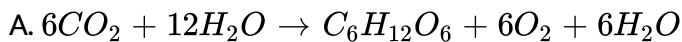
- A. glycogen
- B. protein
- C. starch

D. fatty acid

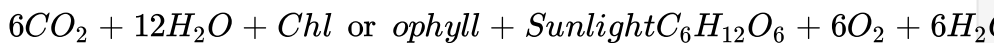
Answer: C

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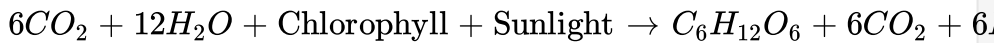
27. Which of the following equations is the summary of photosynthesis ?



C.



D.



Answer: C

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28. Choose the event that does not occur in photosynthesis.

- A. Absorption of light energy by chlorophyll
- B. Reduction of carbon dioxide to carbohydrates
- C. Oxidation of carbon to carbon dioxide
- D. Conversion of light energy to chemical energy

Answer: C



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29. The opening and closing of the stomatal pore depends upon

- A. oxygen
- B. temperature
- C. water in guard cells
- D. concentration of CO_2 on stomata

Answer: C



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30. Choose the forms 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)

Answer: B



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31. Which is the first enzyme to mix with food in the digestive tract ?

- A. Pepsin
- B. Cellulase
- C. Amylase
- D. Trypsin

Answer: C



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32. Which of the following statements (s) is (are) correct ?

- (i) Pyruvate can be converted into ethanol and carbon dioxide by yeast
- (ii) Fermentation takes place in aerobic bacteria
- (iii) Fermentation takes place in mitochondria
- (iv) Fermentation is a form of anaerobic respiration

- A. (i) and (iii)

B. (ii) and (iv)

C. (i) and (iv)

D. (ii) and (iii)

Answer: C



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33. Lack of oxygen in muscles often leads to cramps among cricketers.

This results due to

A. conversion of pyruvate to ethanol

B. conversion of pyruvate to glucose

C. non - conversion of glucose to pyruvate

D. conversion of pyruvate to lactic acid

Answer: D



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34. Choose the correct path of urine in our body

- A. Kidney → Ureter → Urethra → Urinary bladder
- B. Kidney → Urinary bladder → Urethra → Ureter
- C. Kidney → Ureters → Urinary bladder → Urethra
- D. Urinary → Bladder → Kindney → Ureter → Urethra

Answer: C



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35. 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

Answer: A



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Short Answer Type Questions

1. Name the following:

- (a) The process in plants which converts light energy into chemical energy.
- (b) Organisms that cannot prepare their own food.
- (c) Organisms that can prepare their own food
- (d) The cell organelle where photosynthesis occurs.
- (e) The cells which surround a stomatal pore
- (f) An enzyme secreted by gastric glands in stomach Which acts on proteins.



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2. All plants give out oxygen during day carbon dioxide during night . Do you agree with this statement ? Give reason

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3. How do the guard cells regulate opening and closing of stomatal pores ?

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4. Two green plants are kept separately in oxygen free containers, one in the dark and the other in continuous light . Which one will live longer ?

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5. If a plant is releasing carbon dioxide and taking in oxygen during the day, does it mean that there is no photosynthesis occurring ? Justify your

answer.



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6. Why do fishes die when taken out of water ?



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7. Differentiate between an autotroph and a heterotroph.



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8. Is 'nutrition a necessity for an organism ? Discuss.



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9. What would happen if green plants disappear from earth ?



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10. Leaves of a healthy potted plant were coated with vaseline . Will this plant remain healthy for long ? Give reasons for your answer.

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11. How does aerobic respiration differ from anaerobic respiration ?

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12. Match the words of column I with that of column II.

| Column I | Column II |
|--------------|-----------------------|
| A. Phloem | Excretion |
| B. Nephron | Translocation of food |
| C. Veins | Clotting of blood |
| D. Platelets | Deoxygenated blood |

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13. Differentiate between an artery and a vein.

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14. What are the adaptations of leaf for photosynthesis ?

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15. (a) Why is small intestine in herbivores longer than in carnivores ?

(b) What causes movement of food inside the alimentary canal?

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16. What will happen if mucus is not secreted by the gastric glands ?

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17. What is the significance of emulsification of fats ?



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18. What causes movement of food inside the alimentary canal ?



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19. Why does absorption of digested food occur mainly in the small intestine ?



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20. Match the following columns.

| Column I | Column II |
|-------------------------------|-------------------|
| A. Autotrophic nutrition | Leech |
| B. Heterotrophic nutrition | <i>Paramecium</i> |
| C. Parasitic nutrition | Deer |
| D. Digestion in food vacuoles | Green plant |

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21. Why is the rate of breathing in aquatic organisms much faster than in terrestrial organisms ?

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22. Why is the advantage of having four chambered heart ?

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23. What are the major events during photosynthesis.

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24. Mention the major events during photosynthesis.

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25. In each of the following situations what happens to the rate of photosynthesis ?

(a) Cloudy days , No rainfall in the area

(c) Good manuring in the area , (d) Stomata get blocked due to dust

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26. Name the energy currency in the living organisms .When and where is it produced ?

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27. What is common for Cuscuta,ticks and leeches ?

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28. Explain the role of mouth in digestion of food.

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29. What are the functions of gastric glands present in the wall of the stomach?

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30. Match the terms in column I with those in column II .

| Column I | Column II |
|------------|----------------|
| A. Trypsin | Pancreas |
| B. Amylase | Liver |
| C. Bile | Gastric glands |
| D. Pepsin | Saliva |



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31. Name the correct substrates for the following enzymes

(a) Trypsin , (b) Amylase

(c) Pepsin , (d) Lipase



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32. Why do veins have thin walls as compared to arteries ?



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33. What will happen if platelets were absent in the blood ?

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34. Why do animals consume more energy as compared to plants

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35. Why and how does water enter continuously into the root xylem ?

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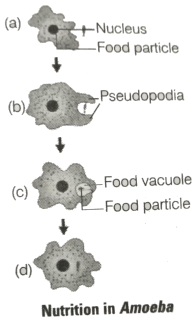
36. Why is transpiration important for plants ?

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1. How do leaves of plants help in excretion ?

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2. Explain the process of nutrition in Amoeba.



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3. Describe the alimentary canal of man.

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4. Explain the process of breathing in man .



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5. Explain the importance of soil for plant growth.



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6. Draw the diagram of alimentary canal of man and label the following part.

Mouth, Oesophagus, Stomach, Intestine



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7. (a) Name the main organs of the human digestive system. Also name the associated glands

(b) How do carbohydrates, fats and proteins get digested in human beings ?



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8. Explain the mechanism of photosynthesis.



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9. Explain the three pathways of breakdown in living organisms.



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10. Describe the flow of blood through the heart of human beings.



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11. Describe the process of urine formation in kidneys.



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