BIOLOGY

BOOKS - OSWAL PUBLICATION

LIFE PROCESSES

Stand Alone 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 convert carbon dioxide and water into carbohydrates in the absence of sunlight.

D. They constitute the first trophic level in food chain

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, bread mould

C. Paramecium, Amoeba, Cuscuta

D. Cuscuta, lice, tapeworm

Answer: B

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

A. Mouth $\rightarrow$ stomach $\rightarrow$ small intestine $\rightarrow$ oesophagus $\rightarrow$ large intestine

B. Mouth $\rightarrow$ oesophagus $\rightarrow$ stomach $\rightarrow$ large intestine $\rightarrow$ small intestine

C. Mouth $\rightarrow$ stomach $\rightarrow$ oesophagus $\rightarrow$ small intestine $\rightarrow$ large intestine

D. Mouth $\rightarrow$ oesophagus $\rightarrow$ stomach $\rightarrow$ small intestine $\rightarrow$ large intestine

Answer: D

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4. 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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5. Select the correct statement.

A. Heterotrophs do not synthesise their own food.

B. Heterotrophs utilise solar energy for photosynthesis.

C. Heterotrophs synthesise their own food.

D. Heterotrophs are capable of converting carbon dioxide and water into carbohydrates.

Answer: A

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6. The autotrophic mode of nutrition requires

A. carbon dioxide and water

B. chlorophyll

C. sunlight

D. all of these

Answer: D

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7. 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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8. A few drops of iodone 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. The breakdown of pyruvate to give carbon dioxide, water and energy takes place in

a) cytoplasm

b) mitochondria

c) chloroplast

d) nucleus

A. cytoplasm

B. mitochondria

C. chloroplast

D. nucleus

Answer: B

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10. The correct sequence of anaerobic reactions in yeast is

A. Glucose $\xrightarrow{\text{cytoplasm}}$ Pyruvate $\xrightarrow{\text{mitochondria}}$ Ethanol + Carbon dioxide

B. Glucose $\xrightarrow{\text{cytoplasm}}$ Pyruvate $\xrightarrow{\text{cytoplasm}}$ Lactic acid

C. Glucose $\xrightarrow{\text{cytoplasm}}$ Pyruvate $\xrightarrow{\text{mitochondria}}$ Lactic acid

D. Glucose $\xrightarrow{\text{cytoplasm}}$ Pyruvate $\xrightarrow{\text{cytoplasm}}$ Ethanol + Carbon dioxide

Answer: D

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11. 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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12. 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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13. Which of the following completes the given equation? Glucose + Oxygen $\rightarrow$ (?)

A. Only carbon dioxide + water + energy

B. Only carbon dioxide + water

C. Only carbon dioxide

D. Only water + energy

Answer: A

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14. Which of the following take place after we exercise?

A. Out body needs more oxygen.

B. Our body needs to replace the energy used.

C. Our body needs to get rid of excess carbon dioxide.

D. All of these

Answer: D

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15. Which of these statements is correct about alveoli?

A. They form a very large surface area.

B. They have a very thin wall.

C. They are covered with blood capillaries.

D. All of these

Answer: D

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16. As air passes through the nasal cavity, it is

A. Filtered in the nostrils

B. Moistened by mucus

C. Warmed to the body temperature

D. All of these

Answer: D

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17. What prevents back flow 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 the above

Answer: A

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18. 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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19. The blood leaving the tissues becomes richer in

A. carbon dioxide

B. water

C. haemoglobin

D. oxygen

Answer: A

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20. The xylem in plants are responsible for

A. transport of water

B. transport of food

C. transport of amino acids

D. transport of oxygen

Answer: A

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21. 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 body

(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. (i) and (iv)

D. (i) and (iii)

Answer: C

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22. 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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23. 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 organs 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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24. Which of these statements is correct about the function of blood?

A. It helps in transportation of respiratory gases.

B. It regulates body temperature.

C. It helps in transportation of waste products.

D. All the above

Answer: D

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25. Thr filtration units of kidneys are called

A. ureter

B. urethra

C. neurons

D. nephrons

Answer: D

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26. The kidneys in human beings are a part of the system for:

A. nutrition

B. respiration

C. excretion

D. transportation

Answer: C

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27. Match the words of Column (A) with that of Column (B)

S. No.	Column (A)		Column (B)
A	Phloem	(i)	Excretion
B	Nephron	(ii)	Translocation of food
C	Veins	(iii)	Clotting of blood
D	Platelets	(iv)	Deoxygenated blood

A. A - (ii), B - (i), C-(iv), D - (iii)

B. A - (iii), B - (ii), C-(i), D - (iv)

C. A - (iv), B - (iii), C-(i), D-(i)

D. A-(i), B - (iv), C- (iii), D - (iv)

Answer: A

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28. Which of the following is the structural and functional unit of the excretory system?

A. Neuron

B. Nephron

C. Alveolus

D. Both (A) and (B)

Answer: B

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29. Choose the correct path of urine in our body

A. kidney $\rightarrow$ ureter $\rightarrow$ urethra $\rightarrow$ urinary bladder

B. kidney $\rightarrow$ urinary bladder $\rightarrow$ urethra $\rightarrow$ ureter

C. kidney $\rightarrow$ ureters $\rightarrow$ urinary bladder $\rightarrow$ urethra

D. urinary bladder $\rightarrow$ kidney $\rightarrow$ ureter $\rightarrow$ urethra

Answer: C

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30. Which of the following substances are removed from blood in the kidneys?

A. Water

B. Urea

C. Sodium

D. Ammonia

Answer: B

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31. Each nephron has a cup shaped upper end called _____, which contains a _____

A. Bowman's capsule, Ampulla

B. Capillaries, Bowman's capsule

C. Ampulla, Glomerulus

D. Bowman's capsule, Glomerulus

Answer: D

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32. Which of the following is used artificially to remove nitrogenous waste products from the blood?

A. Ventilator

B. Transfusion

C. Hemodialysis

D. Angiogram

Answer: C

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Assertion And Reason Based Mcqs

1. Given below are assertion and reason.Point out if both are true with reason being correct explanation,(A) both true but reason is not correct explanation (B),assertion true but reason is wrong (C) both are wrong (D).

Assertion: Hcl converts pepsinogen into active enzyme pepsin

Reason : Pepsin converts proteins into proteoses and peptones

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 and R is true.

Answer: B

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2. Assertion (A): Digestion breaks large complex molecules to simple smaller molecules which can be easily absorbed.

Reason (R): Digestion is necessary for the absorption of all molecule

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 and R is true.

Answer: C

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3. Assertion (A): Muscles of stomach wall possess thick layers of muscle fibers.

Reason (R): These muscles help in mixing the food with the enzymes present in the alimentary canal.

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 and R is true.

Answer: A

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4. Assertion (A): Lipases help in emulsification of fats.

Reason (R): Lipases hydrolyses fats and oils.

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 and R is true.

Answer: D

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5. Assertion (A): Photosynthesis is an anabolic process.

Reason (R): The process of photosynthesis occurs in chlorophyll.

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 and R is true.

Answer: C

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6. Assertion (A): Energy is used during the process of respiration.

Reason (R): Respiration stores energy in the form of ATP.

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 and R is true.

Answer: D

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7. Assertion (A): Humans are not truly aerobic.

Reason (R): They produce lactic acid anaerobically.

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 and R is true.

Answer: B

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8. Assertion : In mammals, complex respiratory system has developed.

Reason : Mammalian skin is impermeable to gases.

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 and R is true.

Answer: B

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9. Assertion (A): Alveoli contain an extensive network of blood vessels.

Reason (R): Alveoli is the site where exchange of gases occurs.

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 and R is true.

Answer: A

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10. Assertion (A): The muscular walls of ventricles are thicker than auricles.

Reason (R): This helps in preventing the back flow of blood.

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 and R is true.

Answer: C

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11. Assertion : There is no mixing of oxygenated and deoxygenated blood in the human heart.

Reason : Valves are present in the heart which allows the movement of blood in one direction only.

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 and R is true.

Answer: B

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12. Assertion (A): Valves are present in the arteries.

Reason (R): Arteries carry oxygenated blood from heart to different body parts except pulmonary artery.

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 and R is true.

Answer: D

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13. Assertion (A): Plants have low energy needs.

Reason (R): Plant bodies have large proportion of dead cells.

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 and R is true.

Answer: A

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14. Assertion (A): Human body produces highly toxic substances, which if not eliminated may cause the death.

Reason (R): Excretory substance removes nitrogenous waste from the body.

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 and R is true.

Answer: B

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15. Assertion (A): Excretory unit of kidneys are nephrons.

Reason (R): It has no role in secretion of urine.

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 and R is true.

Answer: C

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16. Assertion:hemodialysis can save and prolong the life of uremic patients

Reason: waste products like urea can be removed from the blood by the process of hemodialysis.

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 and R is true.

Answer: A

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17. Assertion (A): In humans, major amount of water is absorbed by the tubular part of nephron.

Reason (R): Absorption of water depends on the dissolved waste to be excreted from the body.

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 and R is true.

Answer: B

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Case Based Mcqs

1. Sanjana is suffering from a frequent stomach pain and vomiting. She went to the Doctor. The doctor asked her to go for an ultrasound. In the report, a stone was found in her gall bladder. Doctor asked her to remove the gall bladder by operation. But she was reluctant to go for the operation.

The role played by gall bladder in human body is

A. To store bile

B. To secrete bile

C. To emulsify fats

D. To digest fats

Answer: A

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2. Sanjana is suffering from a frequent stomach pain and vomiting. She went to the Doctor. The doctor asked her to go for an ultrasound. In the report, a stone was found in her gall bladder. Doctor asked her to remove the gall bladder by operation. But she was reluctant to go for the operation.

Removal of gall bladder

A. affects the person's health

B. Has no effect on the person's health

C. Effects the secretion of bile

D. Effects the digestion of proteins

Answer: B

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3. Which of the following statement is correct about bile?

A. It helps in emulsification of fat.

B. It helps in digestion of carbohydrates

C. It helps in absorption of digested food.

D. It helps in egestion of undigested food.

Answer: A

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4. Sanjana is suffering from a frequent stomach pain and vomiting. She went to the Doctor. The doctor asked her to go for an ultrasound. In the report, a stone was found in her gall bladder. Doctor asked her to remove

the gall bladder by operation. But she was reluctant to go for the operation.

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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5. Sanjana is suffering from a frequent stomach pain and vomiting. She went to the Doctor. The doctor asked her to go for an ultrasound. In the report, a stone was found in her gall bladder. Doctor asked her to remove the gall bladder by operation. But she was reluctant to go for the operation.

What is the function of bile salt in the intestine?

A. Activator of lipase

B. Emulsifier

C. Co factor of cholesteryl esterase

D. Inhibitor of lipid absorption

Answer: B

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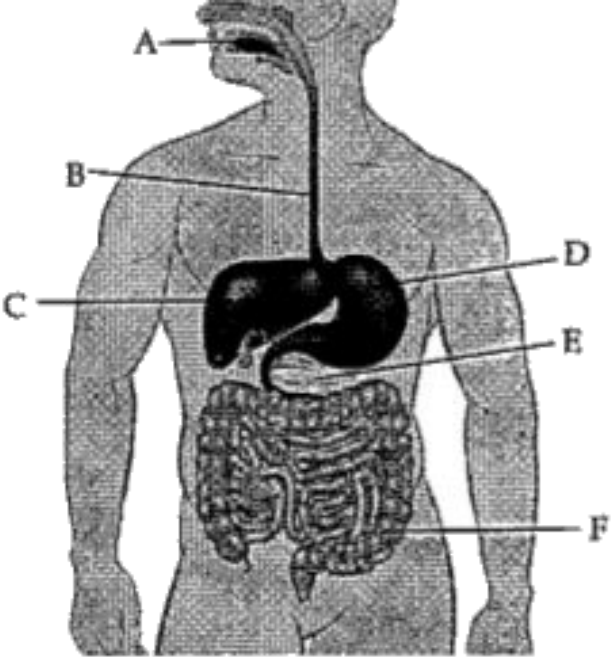
6. The given diagram is of human digestive human. Study the diagram and answer any of the four questions.



Which of these correctly represent the labels B,C,D and E?

A. B- Oesophagus, C- Liver, D- Stomach, E pancreas

B. B- Pancreas, C- oesophagus, D- Liver, E Stomach

C. B- Stomach, C- Pancreas, D- Oesophagus, E Liver

D. B- Liver, C- Stomach, D- Pancreas, E Oesophagus

Answer: A

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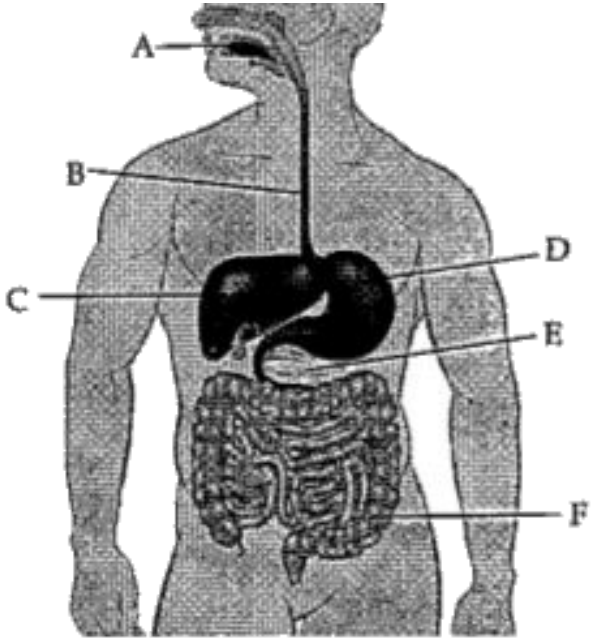
7. The given diagram is of human digestive system. Study the diagram and answer the question.



The secretion that is released by label C is:

A. Bile

B. Pepsin

C. Saliva

D. Gastric juice

Answer: A

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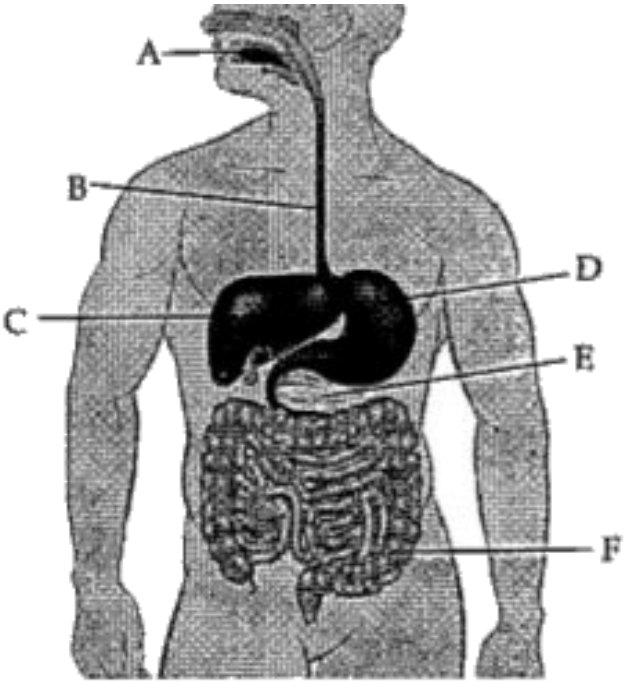
8. The given diagram is of human digestive human. Study the diagram and answer any of the four questions.



Name the digestive juice that lacks enzyme but helps in digestion.

A. Bile juice

B. Pancreatic juice

C. Ptyalin

D. Pepsin

Answer: A

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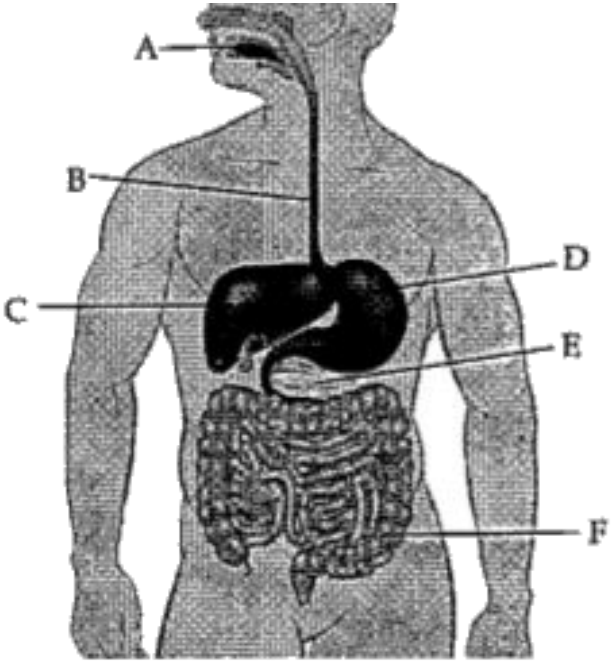
9. The given diagram is of human digestive system. Study the diagram and answer any of the four questions.



The digestion of food starts in

A. A

B. D

C. E

D. F

Answer: A

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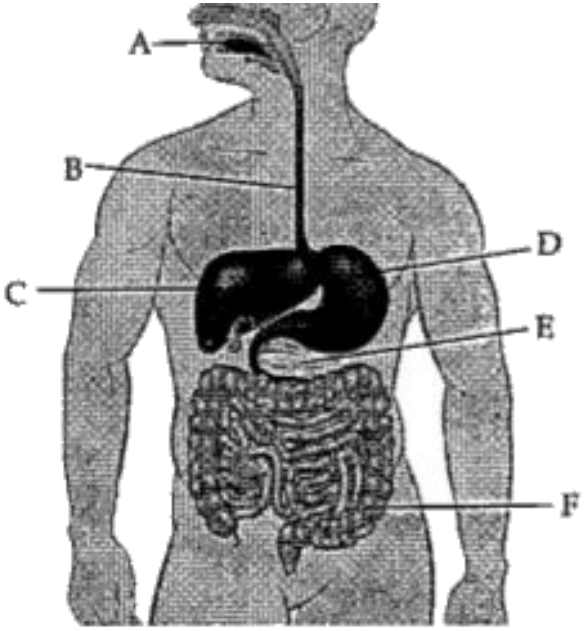
10. The given diagram is of human digestive human. Study the diagram and answer any of the four questions.



In case of diarrhoea, which major process does not takes place normally in region F?

A. Absorption of food

B. Absorption of water

C. Secretion of hormones

D. Removal of waste material

Answer: B

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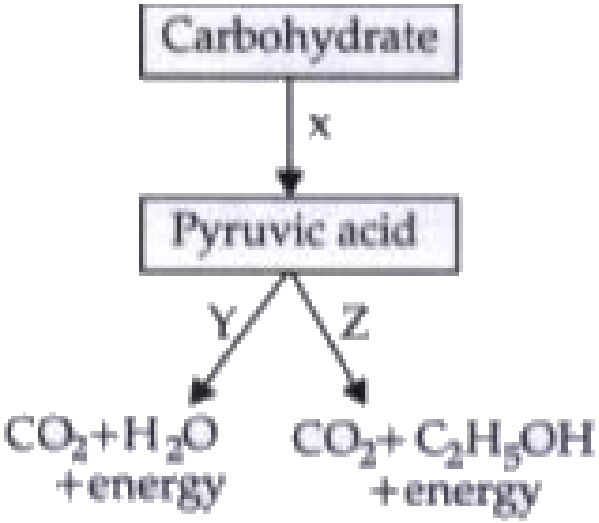
11. Study the given flow chart and answer any of the four questions



Identify X, Y and Z.

A. X-Glycolysis, Y-Anaerobic, Z-Aerobic

B. X-Krebs's cycle, Y-Aerobic, Z-Anaerobic

C. X-Glycolysis , Y-Aerobic, Z - Anaerobic

D. X-Glycolysis, Y-Aerobic, Z-Kreb's cycle

Answer: C

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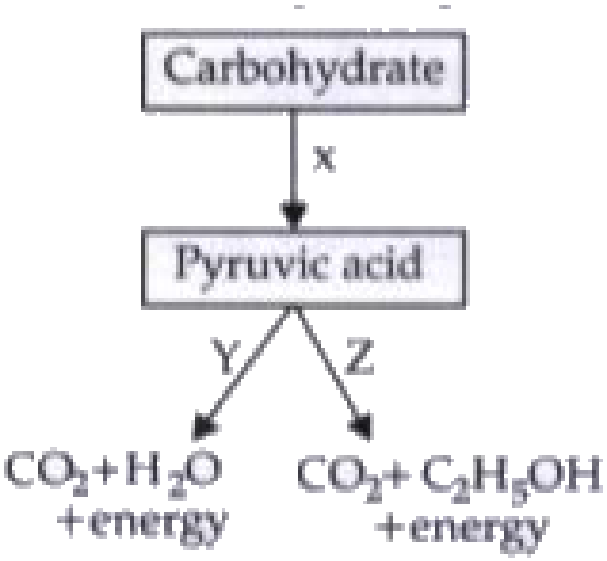
12. Study the given flow chart and answer any of the four questions



The process X occurs in _____ and Y occurs in _____ part of cell.

A. Mitochondria and cytoplasm respectively

B. Cytoplasm and mitochondria respectively

C. Both takes place in cytoplasm

D. Both takes place in mitochondria

Answer: B

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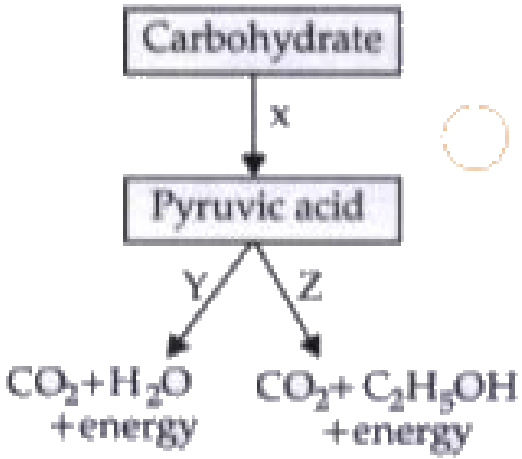
13. Study the given flow chart and answer any of the four questions



In which of these organisms the process Z takes place?

A. Bacteria

B. Humans

C. Yeast

D. Spirogyra

Answer: C

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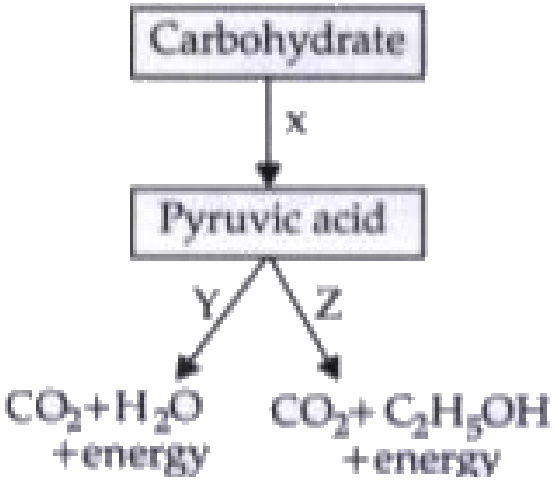
14. Study the given flow chart and answer any of the four questions



In which part of human body do the process Z takes place?

A. In muscle cells

B. In kidneys

C. In liver cells

D. In leydig's cell

Answer: A

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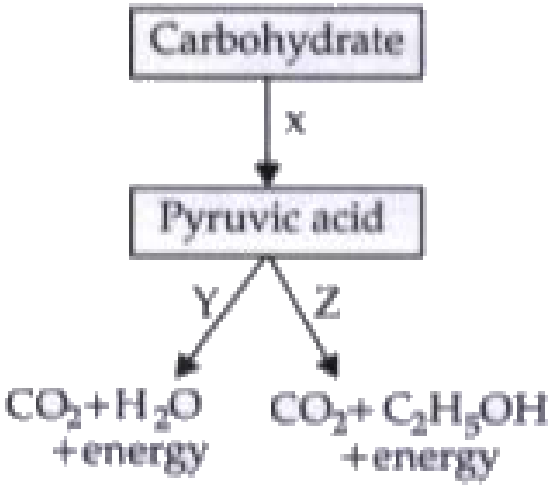
15. Study the given flow chart and answer any of the four questions



Where does aerobic respiration occur in a cell ?

A. Mitochondria

B. Cytoplasm

C. Nucleus

D. Plastid

Answer: A

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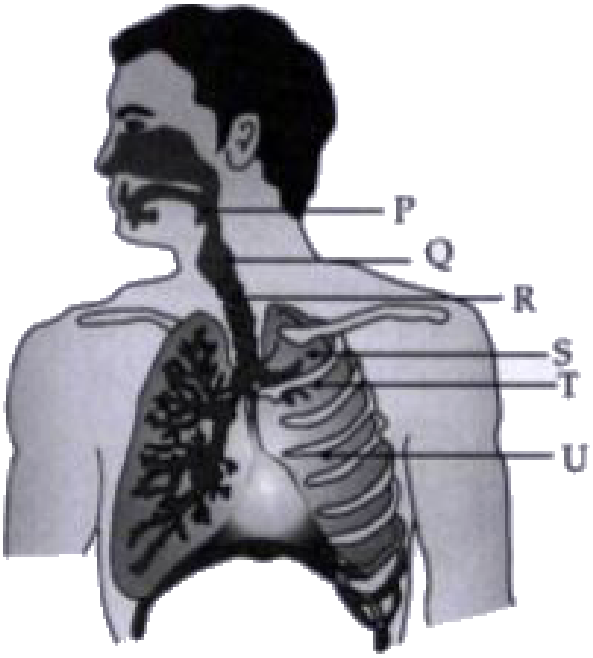
16. Study the diagram of human respiratory system and answer the given question.



The balloon like structures present in 'S' is:

A. Nephron

B. Alveoli

C. Bronchi

D. Bronchiole

Answer: B

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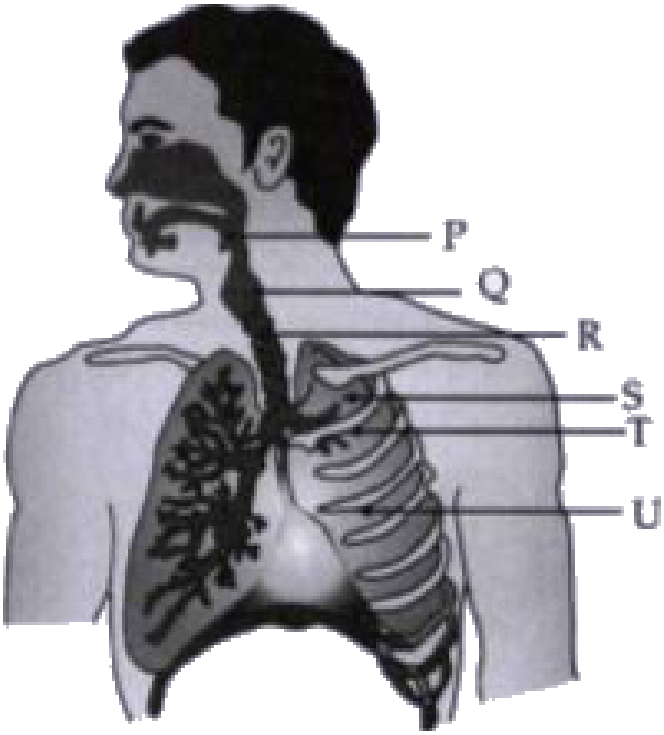
17. Study the diagram of human respiratory system and answer the given question.



Which of these organ is surrounded by cartilaginous rings?

A. P

B. Q

C. R

D. S

Answer: C

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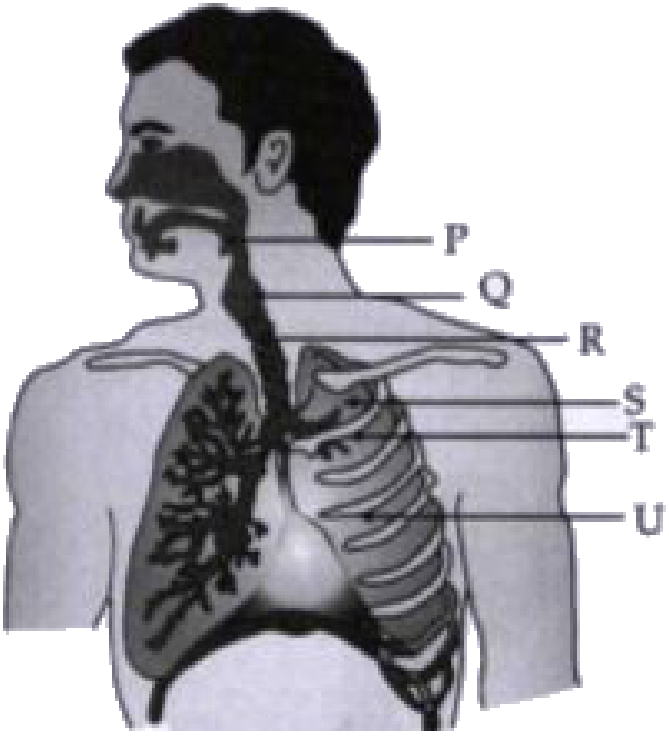
18. Study the diagram of human respiratory system and answer the given question.



Which of these statements is incorrect regarding human lungs?

A. It is the secondary organ for respiration.

B. It is located on the two sides of heart.

C. The membrane that encloses lungs is pleural membrane.

D. The alveolar epithelium of lungs is non-ciliated epithelium.

Answer: A

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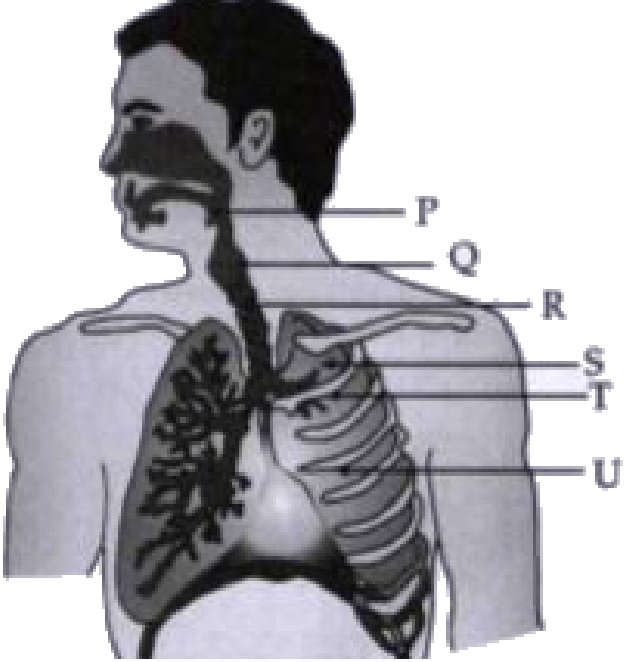
19. Study the diagram of human respiratory system and answer the given question.



Trachea is divided into two smaller tubes called _____.

A. Bronchi

B. Bronchioles

C. Larynx

D. Alveoli

Answer: A

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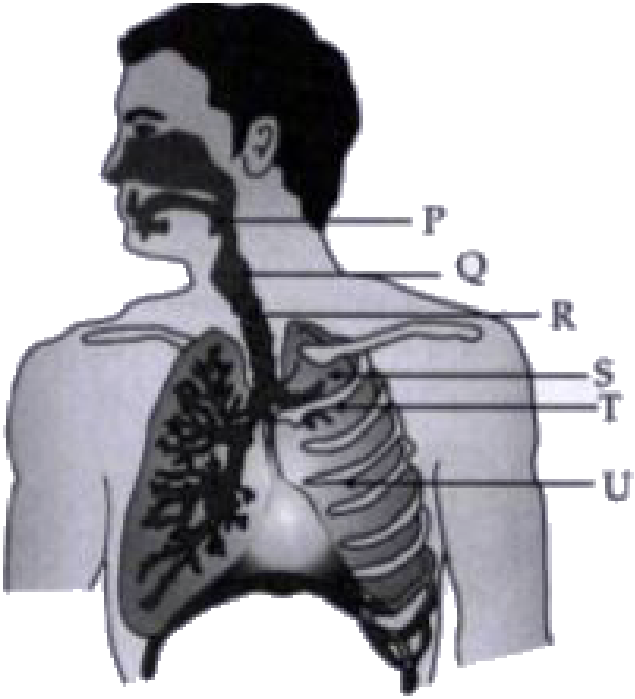
20. Study the diagram of human respiratory system and answer the given question.



Which of these is the function of balloon like structure present in lungs?

A. Exchange of gases

B. Absorption of nutrients

C. Transport of food

D. Removal of waste materials

Answer: A

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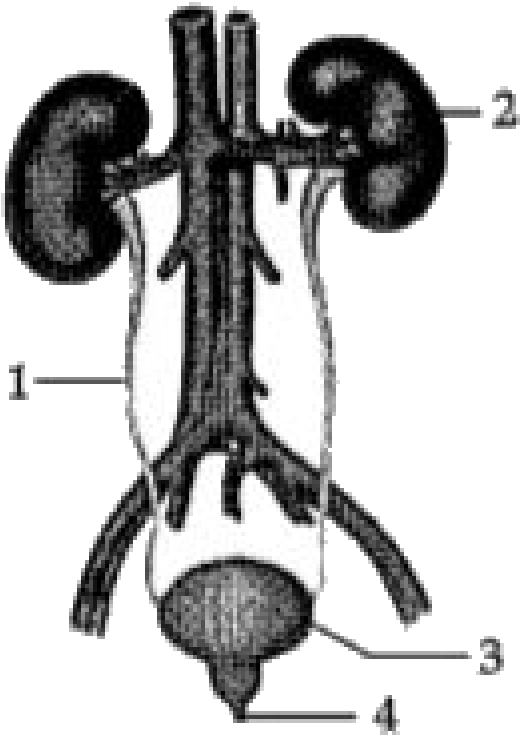
21. The given diagram represents the structure of a human excretory system. Study the diagram and answer any of the four questions.



Identify the part 1 in excretion.

A. Kidney

B. Ureter

C. Urethra

D. Nephron

Answer: B

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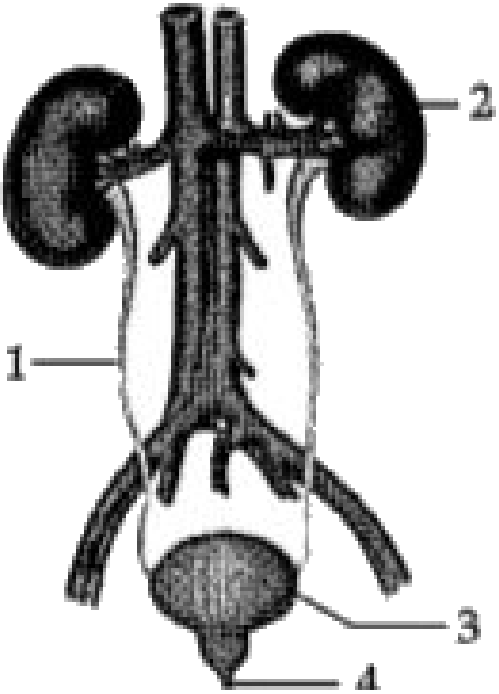
22. The given diagram represents the structure of a human excretory system. Study the diagram and answer any of the four questions.



Which of these is the structural and functional unit of part 2?

A. Alveoli

B. Nephron

C. Neuron

D. None of these

Answer: B

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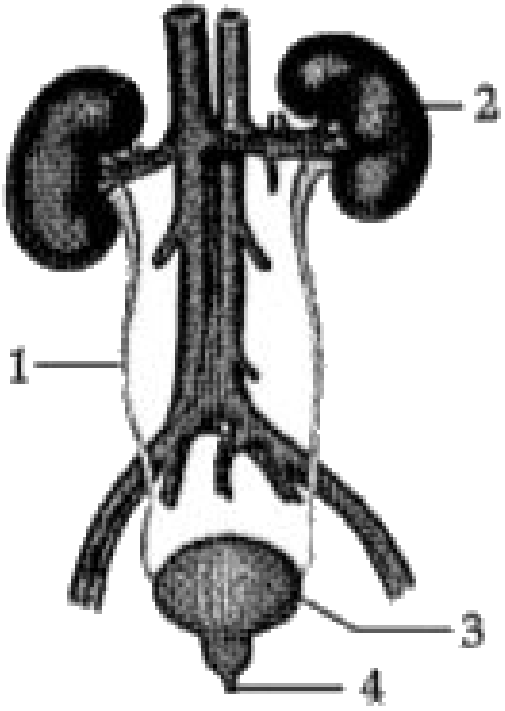
23. The given diagram represents the structure of a human excretory system. Study the diagram and answer any of the four questions.



How can we purify the blood by artificial methods?

A. Filtration

B. Dialysis

C. Reabsorption

D. All of these

Answer: B

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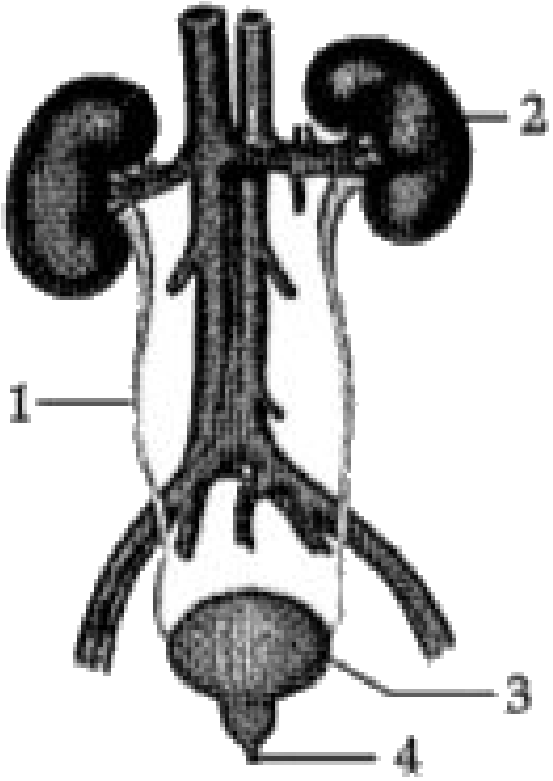
24. The given diagram represents the structure of a human excretory system. Study the diagram and answer any of the four questions.



The main waste present in the urine is:

A. Glucose

B. Urea

C. Blood

D. Protein

Answer: B

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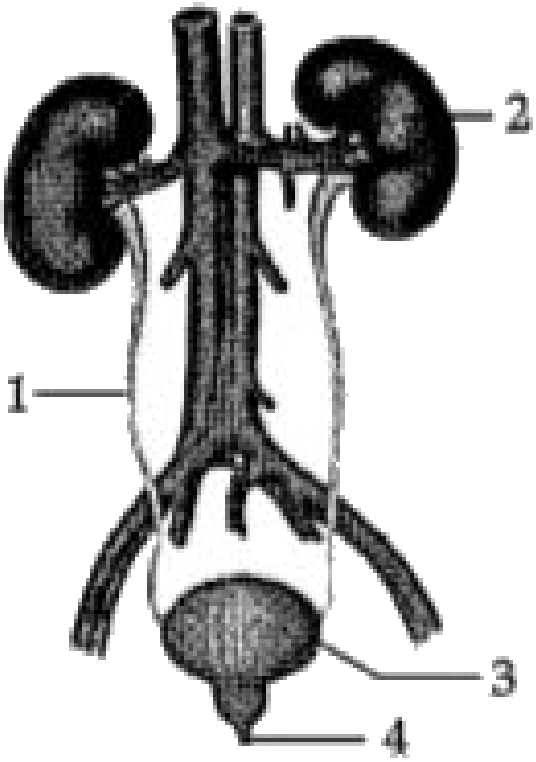
25. The given diagram represents the structure of a human excretory system. Study the diagram and answer any of the four questions.



Choose the correct path of urine in our body:

A. kidney $\rightarrow$ ureter $\rightarrow$ urethra $\rightarrow$ urinary bladder

B. kidney $\rightarrow$ urinary bladder $\rightarrow$ urethra $\rightarrow$ ureter

C. kidney $\rightarrow$ ureters $\rightarrow$ urinary bladder $\rightarrow$ urethra

D. urinary bladder $\rightarrow$ kidney $\rightarrow$ ureter $\rightarrow$ urethra

Answer: C

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26. Oxygen-rich blood from the lungs comes to the thin-walled upper chamber of the heart on the left. The left upper chamber (A) then relaxes. It then contracts and the blood is allowed to enter the next chamber (B), as it expands. When the muscular left lower chamber of heart contracts the blood is pumped out to the body via aorta.

Deoxygenated blood reaches from the body to the upper chamber on the right side of heart (C) and it expands. As this part contracts, the corresponding lower chamber (D) dilates. This transfers the blood to right ventricle, which in turn pumps it to the lungs for oxygenated.

Which of these correctly represents the label A,B,C and D in the above passage?

A. A- Left atrium, B- Left Ventricle, C- Right atrium, D-Right ventricle

B. A- Right ventricle, B- Left atrium, C- Left Ventricle, D-Right atrium

C. A- Right atrium, B- Right ventricle, C- Left atrium, D- Left ventricle

D. A- Left ventricle, B- Right atrium, C- Right ventricle, D- Left atrium

Answer: A

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27. Oxygen-rich blood from the lungs comes to the thin-walled upper chamber of the heart on the left. The left upper chamber (A) then relaxes. It then contracts and the blood is allowed to enter the next chamber (B), as it expands. When the muscular left lower chamber of heart contracts the blood is pumped out to the body via aorta.

Deoxygenated blood reaches from the body to the upper chamber on the right side of heart (C) and it expands. As this part contracts, the corresponding lower chamber (D) dilates. This transfers the blood to right ventricle, which in turn pumps it to the lungs for oxygenated.

Which chambers of human heart contain oxygenated blood?

A. A and B

B. A and C

C. C and B

D. C and D

Answer: A

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28. Oxygen-rich blood from the lungs comes to the thin-walled upper chamber of the heart on the left. The left upper chamber (A) then relaxes. It then contracts and the blood is allowed to enter the next chamber (B), as it expands. When the muscular left lower chamber of heart contracts the blood is pumped out to the body via aorta.

Deoxygenated blood reaches from the body to the upper chamber on the right side of heart (C) and it expands. As this part contracts, the corresponding lower chamber (D) dilates. This transfers the blood to right ventricle, which in turn pumps it to the lungs for oxygenated.

What is the correct route of blood in a human?

A. A $\rightarrow$ B $\rightarrow$ Lungs $\rightarrow$ C $\rightarrow$ D

B. A $\rightarrow$ B $\rightarrow$ D $\rightarrow$ C $\rightarrow$ Lungs

C. C $\rightarrow$ D $\rightarrow$ B $\rightarrow$ A $\rightarrow$ Lungs

D. C $\rightarrow$ D $\rightarrow$ Lung $\rightarrow$ A $\rightarrow$ B

Answer: D

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29. Oxygen-rich blood from the lungs comes to the thin-walled upper chamber of the heart on the left. The left upper chamber (A) then relaxes. It then contracts and the blood is allowed to enter the next chamber (B), as it expands. When the muscular left lower chamber of heart contracts the blood is pumped out to the body via aorta.

Deoxygenated blood reaches from the body to the upper chamber on the right side of heart (C) and it expands. As this part contracts, the corresponding lower chamber (D) dilates. This transfers the blood to right ventricle, which in turn pumps it to the lungs for oxygenated.

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 the above

Answer: A

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30. Oxygen-rich blood from the lungs comes to the thin-walled upper chamber of the heart on the left. The left upper chamber (A) then relaxes. It then contracts and the blood is allowed to enter the next chamber (B), as it expands. When the muscular left lower chamber of heart contracts the blood is pumped out to the body via aorta.

Deoxygenated blood reaches from the body to the upper chamber on the right side of heart (C) and it expands. As this part contracts, the corresponding lower chamber (D) dilates. This transfers the blood to right ventricle, which in turn pumps it to the lungs for oxygenated.

Assertion (A): Human heart does not allow mixing of oxygen rich blood

with carbon dioxide rich blood.

Reason (R): Human heart has different chambers.

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.

Answer: C

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31. Some experiments were carried out using Croton sp. plants to understand the process of photosynthesis. It was observed that the leaves of the plant exposed to light for longer duration accumulated more starch. However, due to presence of pre-formed starch in the leaves, it was difficult to find the net productivity on a fixed exposure to light source. Therefore, it was necessary to obtain starch free leaves in the

plant before starting the experiment.

Which of the following would help obtain starch free leaves in the plant?

A. Expose the leaves to blue light for 48 hours before starting the experiment.

B. Keep the plant in dark for about 48 hours before starting the experiment.

C. Remove starch from the leaves by exosmosis, 48 hours before starting the experiment.

D. Keep the leaves to red light for 48 hours before starting the experiment.

Answer: B

Watch Video Solution

32. Some experiments were carried out using Croton sp. plants to understand the process of photosynthesis. It was observed that the

leaves of the plant exposed to light for longer duration accumulated more starch. However, due to presence of pre-formed starch in the leaves, it was difficult to find the net productivity on a fixed exposure to light source. Therefore, it was necessary to obtain starch free leaves in the plant before starting the experiment.

After a period of illumination, the leaves were boiled in alcohol to make them colourless. Which of the following could be used to test the end product stored in the leaves?

A. Cobalt chloride paper

B. Litmus paper

C. Iodine solution

D. Copper sulphate solution

Answer: C

Watch Video Solution

33. Some experiments were carried out using Croton sp. plants to understand the process of photosynthesis. It was observed that the leaves of the plant exposed to light for longer duration accumulated more starch. However, due to presence of pre-formed starch in the leaves, it was difficult to find the net productivity on a fixed exposure to light source. Therefore, it was necessary to obtain starch free leaves in the plant before starting the experiment.

Some of the starch free leaves were coated with wax on both the surfaces. The plant was maintained under normal environmental conditions. At the end of the experiment, the wax coated leaves are likely to show _____.

A. Accumulation of more water.

B. Wilting of the wax coated leaves.

C. Increase in sucrose accumulation.

D. Decrease in number of chloroplasts

Answer: B

Watch Video Solution

34. Some experiments were carried out using Croton sp. plants to understand the process of photosynthesis. It was observed that the leaves of the plant exposed to light for longer duration accumulated more starch. However, due to presence of pre-formed starch in the leaves, it was difficult to find the net productivity on a fixed exposure to light source. Therefore, it was necessary to obtain starch free leaves in the plant before starting the experiment.

During the morning hours, using a fine blade, an incision was made to the leaves such that the phloem tissue was cut open. Analysis of the liquid oozing out was found to contain high amount of:

A. Xylose

B. Ribose

C. Sucrose

D. Galactose

Answer: C

Watch Video Solution

35. Some experiments were carried out using Croton sp. plants to understand the process of photosynthesis. It was observed that the leaves of the plant exposed to light for longer duration accumulated more starch. However, due to presence of pre-formed starch in the leaves, it was difficult to find the net productivity on a fixed exposure to light source. Therefore, it was necessary to obtain starch free leaves in the plant before starting the experiment.

The equation given below represents photosynthesis. Identify P and Q.

$$P + \text{water} \xrightarrow[\text{chlorophyll}]{\text{sunlight}} \text{glucose} + \text{Q}$$

A. P-Carbon dioxide, Q - Oxygen

B. P- Oxygen, Q - Oxygen

C. P-Carbon dioxide, Q - Carbon dioxide

D. P- Oxygen, Q - Carbon dioxide

Answer: A

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Self Assessment 1 I Objective Type Question A Multiple Choice Question

1. Which of the following is not the function of HCl in stomach?

A. It breaks down proteins into peptones.

B. It kills the becteria ingested with food and drinks.

C. It halps in activation of persinogen.

D. If softens the food.

Answer: D

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2. Which of the following four secretions is correctly matched with its source, and action?

	Secretion	Source	Action
(i)	Salivary amylase	Salivary gland	Breaks down starch into sugar.
(ii)	Rennin	Stomach	Emulsification of fat
(iii)	Trypsin	Stomach	Breaks down protein into amino acids.
(iv)	Lipase	Pancreas	Release of bile juice

A. i and ii

B. i and iii

C. ii and iv

D. iii and iv

Answer:

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3. Match the column I (Organs) with column II (Functions) and choose the correct options.

Column-I (Organs)	Column- II (Functions)
A. Nose	(I) Produces sound
B. Pharynx	(II) Traps bacteria and dust.
C. Larynx	(III) Helps in exchange of gases.
D. Alveoli	(IV) Allows food to pass from mouth to oesophagus

A. A-(IV), B - (I), C-(III), D-(II)

B. A-(II), B-(IV), C-(I), D- (III)

C. A-(III), B-(II), C-(IV), D-(I)

D. A-(I), B - (III), C-(II), D-(IV)

Answer: B

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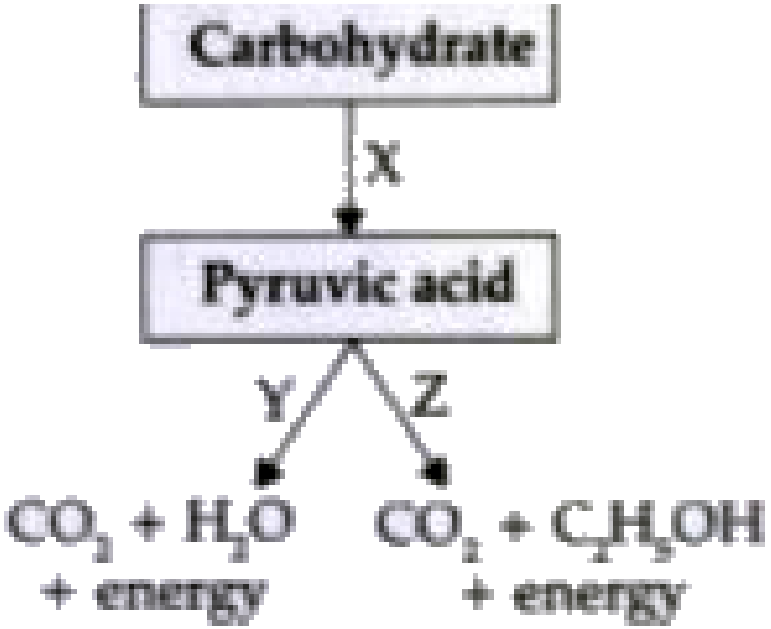
Self Assessment 1 I Objective Type Question B Passage Diogram Based Question

1. Study the given fkow chart and answer the following answers.



Identify X, Y and Z.

A. X-Glycolysis, Y-Anaerobic, Z-Aerobic

B. X-Krebs's cycle, Y-Aerobic, Z-Anaerobic

C. X-Glycolysis, Y- Aerobic, Z- Anaerobic

D. X-Glycolysis, Y - Aerobic, Z-Krebs's cycle

Answer:

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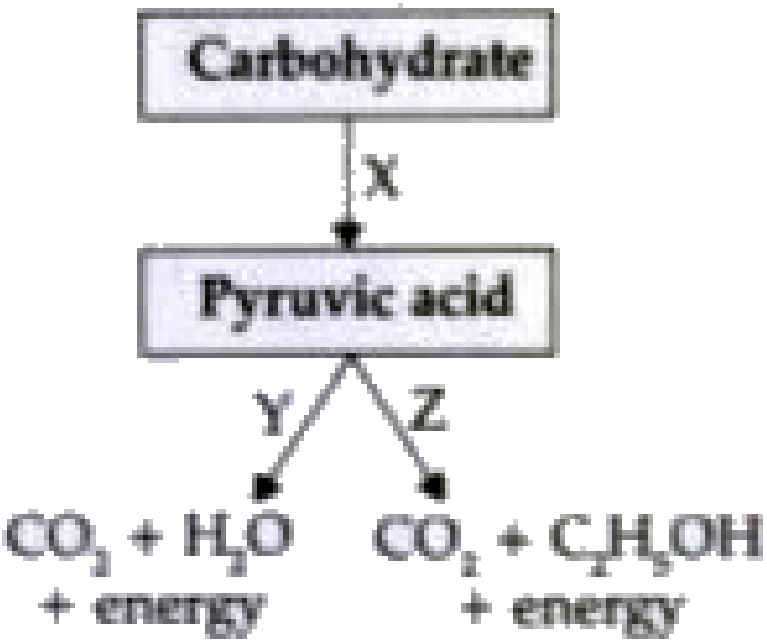
2. Study the given flow chart and answer the following answers.



The process X occurs in _____ and Y occurs in _____ part of cell?

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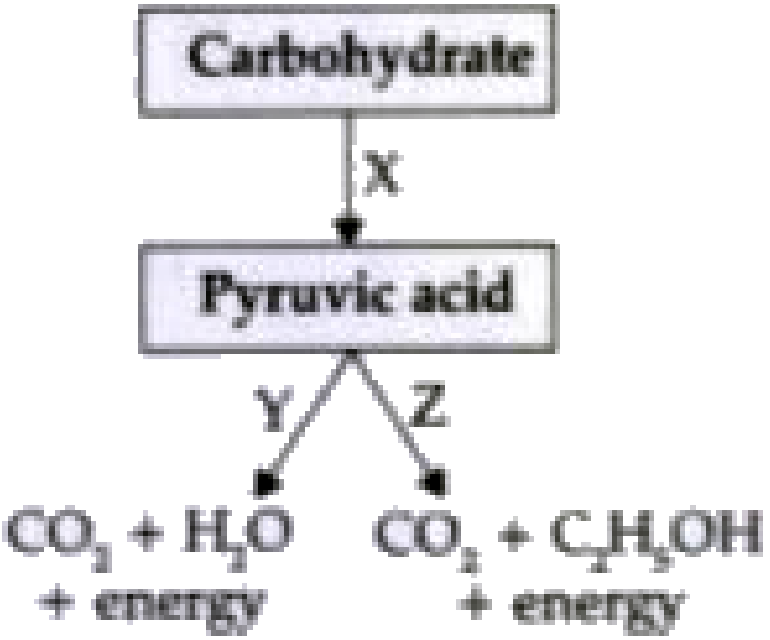
3. Study the given flow chart and answer the following answers.



Name an organism in which process Z takes place?

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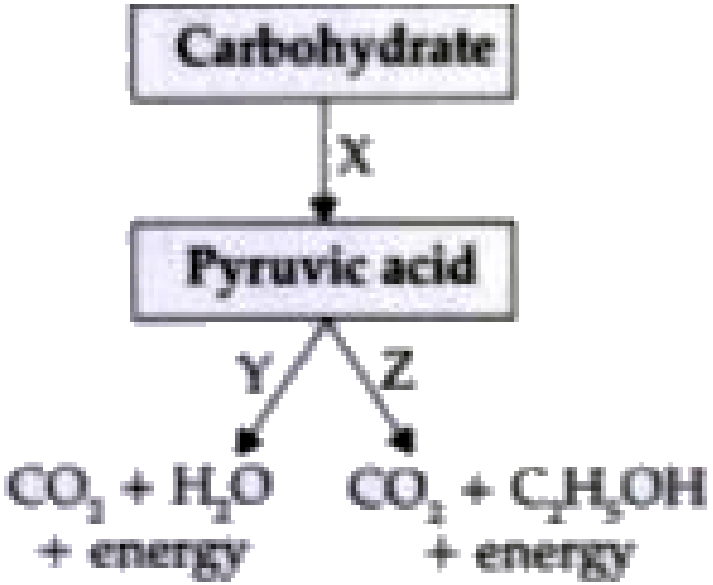
4. Study the given flow chart and answer the following answers.



Where does process z takes place in human body?

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Self Assessment 1 I Objective Type Question C Assertion And Reason Type Questions

1. (a) Both assertion (A) and (R) are true and reason (R) is the correct explanation of assertion (A).

(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

(c) Assertion (A) is true but reason (R) is false.

(d) Assertion (A) is false but reason (R) is true

Assertion (A) : Herbivores have larger small intestine as compared to carnivores.

Rason (R) : Complete digestion of food takes places in small intestine.

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2. (a) Both assertion (A) and (R) are true and reason (R) is the correct explanation of assertion (A).

(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

(c) Assertion (A) is true but reason (R) is false.

(d) Assertion (A) is false but reason (R) is true

Assertion (A) : Human beings are truly aerobic.

Reason (R) : They produce lactic acid from muscles.

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3. Name a common nutrient that is absorbed in the small intestine and reabsorded by the kidney tubules.

Watch Video Solution

4. Mention any one point of difference between pepsin and trypsin.

Watch Video Solution

5. Name the respiratory pigment in human beings. Where is this pigment found ?

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Self Assessment 1 Ii Short Answer Type Questions D Very Short Answer Type Question

1. Explain the processes of aerobic respiration in mitochondria of a cell and anaerobic respiration in yeast and muscle with the help of word equations.

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2. A veriegated leaf with green and yellow patches in used for photosynthesis. Before the experiment the green portions (A), and the pale yellow portions (B), are observed. What will be the colour of 'A' just before and after the starch test? Also write the equation of photosyntesis and mark, as well as validate form which molecule the by-product is obtained.

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3. Explain the ways in which glucose is broken down in absence of oxygen.

Watch Video Solution

Self Assessment 2 I Objective Type Questions A Multiple Choice Questions

1. Which of the following statement is incorrect about artery?

A. It carries oxygenated blood from heart to different body parts.

B. It is also called collecting vessel.

C. It is thick, elastic and muscular.

D. It has no valves.

Answer:

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2. _____ the key orgen of, cerdiovascuar system which acts as a muscular pump.

A. Kidney

B. Heart

C. Lungs

D. Stomach

Answer:

Watch Video Solution

3. In aetifical kidney, which substance passes from the blood to the dialysis fluid?

A. Urea

B. Ammonia

C. Uric acid

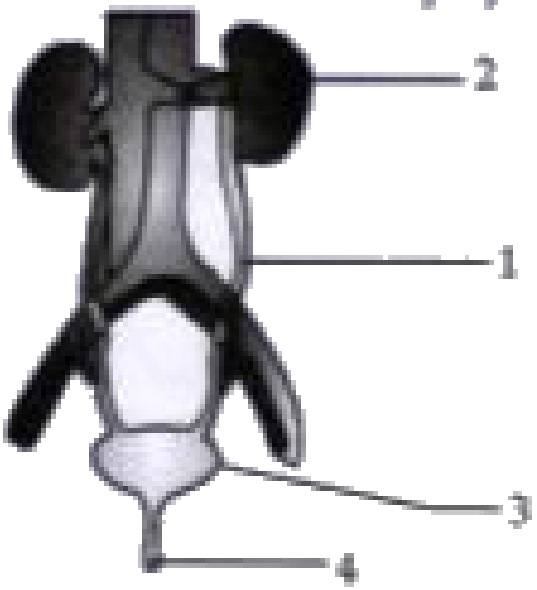
D. Creatinine

Answer:

Watch Video Solution

Self Assessment 2 I Objective Type Questions B Passage Diagram Based Questions

1. The given diagram represents the structure of a human excretory system.



What is the role of part 1 in excretion?

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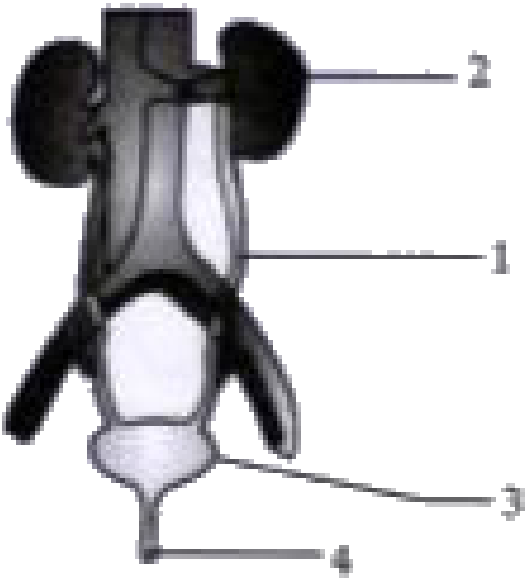
2. The given diagram represents the structure of a human excretory system.



Name the structural and functional part of 2.

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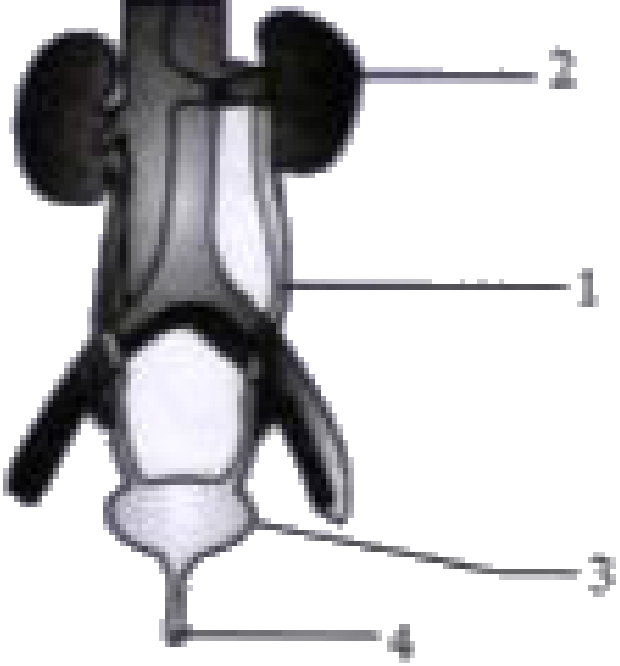
3. The given diagram represents the structure of a human excretory system.



The urge to urinate can be controlled. Give reason.

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Self Assessment 2 I Objective Type Questions C Assertion And Reason Type Questions

1. Assertion (A) : The main excretory unit of kidney is nephron.

Reason (R) : It carries out filtration, selective absorption and tubular secretion to from urine in kidney.

A. Both assertion (A) and (R) are true and reason (R) is the correct explanation of assertion (A).

B. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

C. Assertion (A) is true but reason (R) is false.

D. Assertion (A) is false but reason (R) is true.

Answer:

Watch Video Solution

2. The oxygenated and deoxygented blood is separate in the heart of mammals.

Reason (R) : This allows efficient supply of oxygen to all tissues.

A. Both assertion (A) and (R) are true and reason (R) is the correct explanation of assertion (A).

B. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

C. Assertion (A) is true but reason (R) is false.

D. Assertion (A) is false but reason (R) is true.

Answer:

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Self Assessment 2 I Objective Type Questions D Very Short Answer Type Questions

1. Name the component of blood which transport :

(i) Food, carbon dioxide and nitrogenous wastes

(ii) Oxygen.

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2. Why plants have low energy needs?

Watch Video Solution

3. Mention the pathway of urine starting from the organ of its formation.

Watch Video Solution

Self Assessment 2 Ii Short Answer Type Question

1. List three differences between arteries and veins.

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Ncert Corner Intext Question

1. Why is diffusion insufficient to meet the oxygen requirements of multicelluar organisms like humans?

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2. What criteria do we use to decide whether something is alive?

Watch Video Solution

3. What processes would you consider essential for maintaining life?

Watch Video Solution

4. What are the differences between autotrophic nutrition and heterotrophic nutrition?

Watch Video Solution

5. Where plants get each each of the raw materials required for photosyntesis?

Watch Video Solution

6. What is the role of the acid in our stomech?

Watch Video Solution

7. What is the function of digestive enzymes?

Watch Video Solution

8. How is the small intestine designed to absorb digested food?

Watch Video Solution

9. What advantage over an aquatic organism does a terrestrial organism have with regard to obtaining oxygen for respiration?

Watch Video Solution

10. What are the different ways in which glucose is oxidised to provide energy in various organisms?

Watch Video Solution

11. How is oxygen and carbon dioxide transported in human beings?

Watch Video Solution

12. How are the lungs designed in human beings to maximise the area for exchange of gases?

Watch Video Solution

13. What are the components of the transport system in human beings? What are the functions of these components?

Watch Video Solution

14. Why is it necessary to separate oxygenated and deoxygenated blood in mammals and birds?

Watch Video Solution

15. What are the components of the transport system in highly organised plants?

Watch Video Solution

16. How are water and minerals transported in plants?

Watch Video Solution

17. How is food transported in plants?

Watch Video Solution

18. Describe the structure and functioning of nephrons.

Watch Video Solution

19. What are the methods used by plants to get rid of excretory products?

Watch Video Solution

20. How is the amount of urine produced regulated?

Watch Video Solution

Exercise Questions

1. The kidneys in huuman beings are a part of the system for

A. nutrition

B. respiration

C. excretion

D. transportation

Answer: C

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2. The xylem in plants are responsible for

A. transport of water

B. transport of food

C. transport of amino acids

D. transport of oxygen

Answer: A

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3. The autotrophic mode of nutrition requires :

A. carbon dioxide

B. chlorophyll

C. sunlight

D. all these

Answer: D

Watch Video Solution

4. The breakdown of pyruvate to give carbon dioxide, water and energy takes place in

A. cytoplasm

B. mitochondria

C. chloroplast

D. nucleus

Answer: B

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5. How are fats digested in our bodies? Where does this process take place?

Watch Video Solution

6. What is the role of saliva in the digestion of food?

Watch Video Solution

7. What are the necessary conditions for autotrophic nutrition and what are its by products?

Watch Video Solution

8. What are the differences between aerobic and anaerobic respiration? Name some organisms that use the anaerobic mode of respiration.

Watch Video Solution

9. How are the alveoli designed to maximise the exchange of gases?

Watch Video Solution

10. What would be the consequences of a dificiency of haemoglobin in our bodies?

Watch Video Solution

11. Describe double circulation in human beings. Why is it necessary?

Watch Video Solution

12. What are the differences between the transport of materials in xylem and phloem?

Watch Video Solution

13. Compare the functioning of alveoli in the lungs and nephrons in the kidney with respect to their structure and functioning.

Watch Video Solution

Ncert Exemplar Multiple Choice Questions

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 carbohydrats in the form of starch

C. They convert 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,bread mould

C. Paramecium, Amoeba, Cuscuta

D. Cuscuta, lice, tapeworm

Answer: B

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3. Select the correct statement.

A. Heterotrophs do not syntesise their own food.

B. Heterotrophs utilise solar energy for photosynthesis.

C. Heterotrophs synthesise 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. Adsorption 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. Mucous

C. Salivary anylase

D. Bile

Answer: B

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

A. Stomach

B. Small intestine

C. Large intestine

D. Oesophagus

Answer: B

Watch Video Solution

8. A few drops of iodone 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

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

12. The correct sequence of anaerobic reactions in yeast is

A. $\text{Glucose} \xrightarrow{\text{eytoplasm}} \text{Pyruvate} \xrightarrow{\text{mitochondria}} \text{Ethonol} + \text{Carbon dioxide}$

B. $\text{Glucose} \xrightarrow{\text{cytoplasm}} \text{Pyruvate} \xrightarrow{\text{cytoplasm}} \text{Ethonol} + \text{Lactic acid}$

C. $\text{Glucose} \xrightarrow{\text{cytoplasm}} \text{Pyruvate} \xrightarrow{\text{mitochondria}} \text{Ethonol} + \text{Lactic acid}$

D. $\text{Glucose} \xrightarrow{\text{cytoplasm}} \text{Pyruvate} \xrightarrow{\text{cytoplasm}} \text{Ethonol} + \text{Carbon dioxide}$

Answer: D

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

A. $\text{Glucose} \xrightarrow{\text{mitochondria}} \text{puruvate} \xrightarrow{\text{cytoplasm}} CO_2 + H_2O + \text{Energy}$

B. $\text{Glucose} \xrightarrow{\text{cytoplasm}} \text{puruvate} \xrightarrow{\text{mitochondria}} CO_2 + H_2O + \text{Energy}$

C. $\text{Glucose} \xrightarrow{\text{cytoplasm}} \text{puruvate} + \text{Energy} \xrightarrow{\text{mitochondria}} CO_2 + H_2O$

D.

$\text{Glucose} \xrightarrow{\text{cytoplasm}} \text{puruvate} + \text{Energy} \xrightarrow{\text{mitochondria}} CO_2 + H_2O + \text{Energ}$

Answer: D

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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 → tracheapharynx → 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 the above

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 organs of the body.

D. They have thicjk elastic walls without vlaves inside, blood flows under hagh pressure and carry blood away form the heart to different parts of the body.

Answer: D

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22. Thr 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. haemoglobin

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 ?

A. $6CO_2 + 12H_2O \rightarrow C_6H_{12}O_6 + 6O_2 + 6H_2O$

B. $6CO_2 + H_{20} \rightarrow \text{Sunlight} \rightarrow C_6H_{12}O_6 + O_2 + 6H_2O$

C.

$$6CO_2 + 12H_2O + \text{Chlorophyll} + \text{Sunlight} \rightarrow C_6H_{12}O_6 + 6O_2 + 6H$$

D.

$$6CO_2 + 12H_2O + \text{Chlorophyll} + \text{Sunlight} \rightarrow C_6H_{12}O_6 + 6CO_2 + 6$$

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 in 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 digests proteins and lipase emulsified fats.

Answer: C

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32. Which of the following statement(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 → ureter → urinary → bladder → urethra

D. urinary bladder → kidney → 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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Ncert Exemplar Short Answer Questions Name The Following

1. The process in plants that links light energy with chemical energy

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2. Organisms that can prepare their own food

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3. Name the organelle of plant cells in which photosynthesis occurs

Watch Video Solution

4. The cells surrounding the stomatal pore are

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5. Organisms that cannot prepare their own food

Watch Video Solution

6. An enzyme secreted from gastric glands in stomach that acts on proteins.

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

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

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9. 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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10. 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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11. Why do fish die when taken out of water ?

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12. Differentiate between an autotroph and a heterotroph.

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

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14. What wuold happen if green plants disappear from earth ?

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15. 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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16. How does aerobic respiration differ from anaerobic respiration ?

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17. Match the words of cloumn (A) with that of Column (B)

S. No.	Column (A)		Column (B)
A	Phloem	(i)	Excretion
B	Nephron	(ii)	Translocation of food
C	Veins	(iii)	Clotting of blood
D	Platelets	(iv)	Deoxygenated blood

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18. Differentiate between an artery and a vein.

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19. What are the adaptations of leaf for photosynthesis ?

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20. (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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21. What will happen if mucus is not secreted by the gastric glands ?

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22. What is the significance of emulsification of fats ?

Watch Video Solution

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

Watch Video Solution

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

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25. Match Group (A) with Group (B)

	Group A		Group B
A	Autotrophic nutrition	(i)	Leech
B	Heterotrophic nutrition	(ii)	Paramecium
C	Parasitic nutrition	(iii)	Deer
D	Digestion in food vacuoles	(iv)	Green plant

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26. Why is the rate of breathing in aquatic organisms much faster than in terrestiral organisms ?

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27. Why is blood circulation in human heart called double circulation?

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28. What is the advantage of having four chambered heart?

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29. Mention the major events during photosynthesis.

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30. 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

A. Cloudy days

B. No rainfall in the area

C. Good manuring in the area

D. Stomata get blocked due to dust

Answer:

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

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

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

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

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35. Match the terms in Column (A) with those in Column (B)

	Column A		Column B
A	Trypsin	(i)	Pancreas
B	Amylase	(ii)	Liver
C	Bile	(iii)	Gastric glands
D	Pepsin	(iv)	Saliva

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36. Name the correct substrates for the following enzymes

(a) Trypsin , (b) Amylase

(c) Pepsin , (d) Lipase

A. Trypsin

B. Amylase

C. Pepsin

D. Lipase.

Answer:

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

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

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39. plants have low energy need as compared to animals. Explain.

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

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41. Why is transpiration important for plants ?

A. It helps in absorption and upward movement of water and minerals from roots to leaves.

B. It helps in creating a transpiration pull which allows upward movement of water in xylem

C. It prevents the plant parts from heating up.

D. All of the above

Answer: D

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42. How do leaves of plants help in excretion ?

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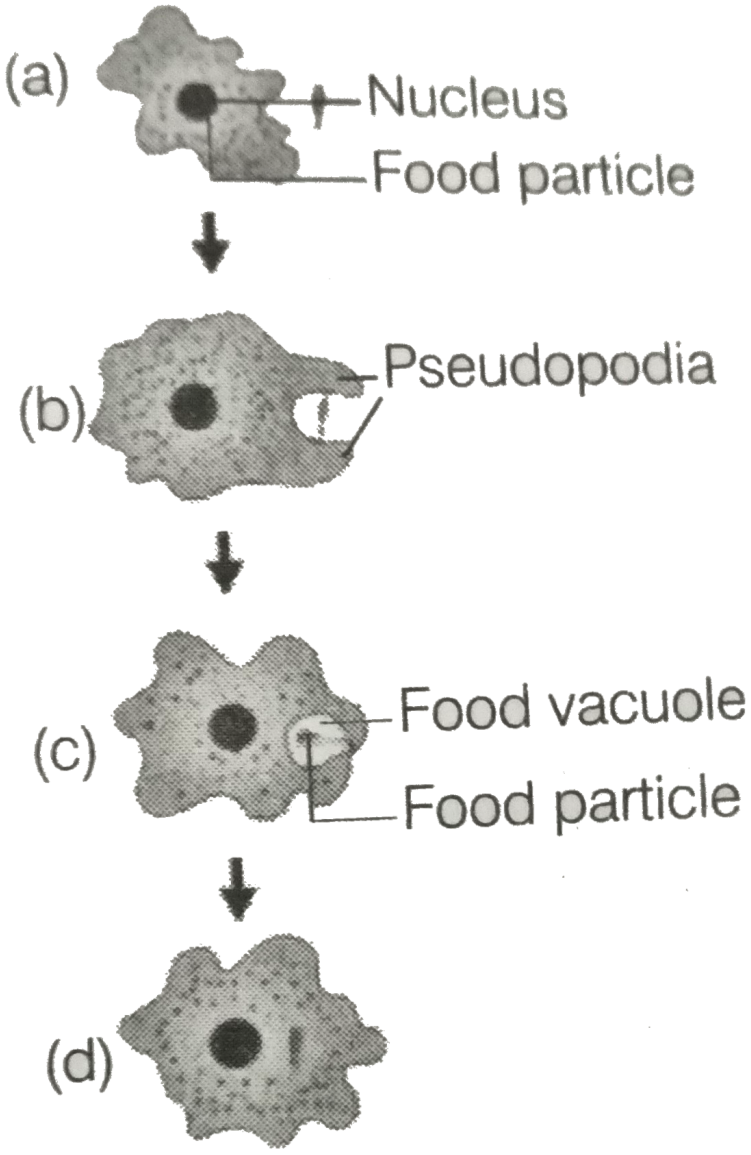
Ncert Exemplar Long Answer Questions

1. Explain the process of nutrition in Amoeba.



Nutrition in *Amoeba*

Amoeba is a unicellular animals which follows holozoic mode of nutrition . The process of obtaining good by Amoeba is called phagocytosis .

The various steps involved in phagocytorsis.

(i)

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2. Give an account of various parts of alimentary canal of man.

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3. Explain the process of breathing in man .

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4. Explain the importance of soil for plant growth.

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

Mouth, Oesophagus,Stomach,Intestine

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6. (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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7. Explain the mechanism of photosynthesis.

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

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9. Describe the flown of blood through the heart of human beings.

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10. Describe the process of urine formation in kidneys.

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Board Corner Short Answer Type Questions

1. Write three types of blood vessels. Give one important feature of each.

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2. Define the term transpiration. Design an experiment to demonstrate this process.

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3. (a) What a photosynthesis ?

(b) Write a chemical equation to show the process of photosynthesis in plants.

(c) Explain the mechanism of photosynthesis

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4. What are the differences between autotrophic nutrition and heterotrophic nutrition?

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5. What is transpiration? List its two functions.

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6. What is translocation ? Why is it essential for plants?

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7. Where do the substances in plants reach as a result of traslocation?

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8. List two types of the transport system in human beings and write the functions of any one of these.

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Board Corner Long Answer Type Questions

1. (a) Mention any two components of blood.

(b) Trace the movement of oxygenated blood in the body.

(c) Write the function of valves present in between atria and ventricles.

(d) Write one structural difference between the composition of artery and veins.

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2. (a)Define excretion.

(b) Name the basic filtration unit present in the kidney.

(c) Draw excretory system in human beings amd label the following organs excretory system which perform following functions:

(i) form urine.

(ii) is a long tube which collects unrine from kidney.

(iii) Store urine until it is passed out.

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