



BIOLOGY

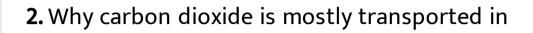
BOOKS - OSWAL PUBLICATION

DIKSHA QUESTIONS

Life Processes Very Short Answer

1. Which organelle perform aerobic respiration

in cell?



dissolved form?



3. Enlist the site of synthesis and storage of

bile.

4. If salivary amylase is lacking in the saliva, which of the following events in the mouth cavity will be affected?



5. Define photolysis.



6. Lack of oxygen in muscles often leads to cramps among cricketers. This results due to
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7. Why do the walls of trachea not collapse when there is less air in it?

8. What do you mean by ascent of sap in plants ?
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9. What is osmoregulation? Describe how the

kidneys help in osmoregulation in mammals?

 10. Which chemical is used to test the

 presence of starch ?

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11. In photosynthesis, which substances are used up, which are produced and which are necessary, but remain unchanged after the

reaction?

	Used up	Produced	Remain Unchanged
(a)	Carbon dioxide	Water	Oxygen
(b)	Chlorophyll	Carbon dioxide	Water
(c)	Oxygen	Starch	Cellulose
(d)	Water	Oxygen	Chlorophyll



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12. In the following questions, a statement of assertion (A) is followed by a statement of reason (R),

Assertion: Transpiration cools leaf surface.

Reason: Transpiration helps in translocation of

sugar in plants

A. Both assertion (A) and reason (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:



13. Assertion: Villi are present on the internal wall of intestine.

Reason: Villi absorb digested food.

A. Both assertion (A) and reason (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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14. What is the mode of nutrition in fungi?

A. Autotrophic

- B. Heterotrophic
- C. Saprophytic
- D. Parasitic

Answer: C

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15. vocal cords are situated at

A. pharynx

B. glottis

C. bronchial tube

D. larynx

Answer: D

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16. Fill in the blanks: Ultra filtration takes place

in _____ of the nephron.

17. Fill in the blanks: _____ is involved in

breakdown of glucose to produce energy for

metabolic activities in a cell.



18. What happens to the glucose present in the filtrate when it reaches the proximal convoluted tubules?

1. What substances are contained in gastric

juice ? What are their functions?

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2. What are the end products formed during

fermentation in yeast? Under what conditions

a similar process takes place in our body that

leads to muscle cramps?



into the root xylem?

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4. Bile juice contains no digestive enzymes, yet

it is important for digestion. Why?

5. Why does absorption of digested food occur

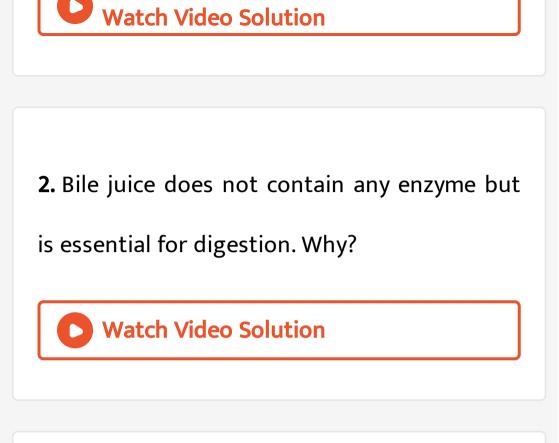
mainly in the small intestine ?



Life Processes Long Answer

1. Draw a diagram of human alimentary canal and label on it: Oesophagus, buccal cavity, stomach(small intestine, large intestine(colon).





3. Elucidate the process of double circulatory system with the help of a diagram.
Write one function each of the following components of the transport system in human

beings: a) Blood vessels b) Blood platelets c)

Lymph d) Heart



4. How does aerobic respiration differ from

anaerobic respiration ?

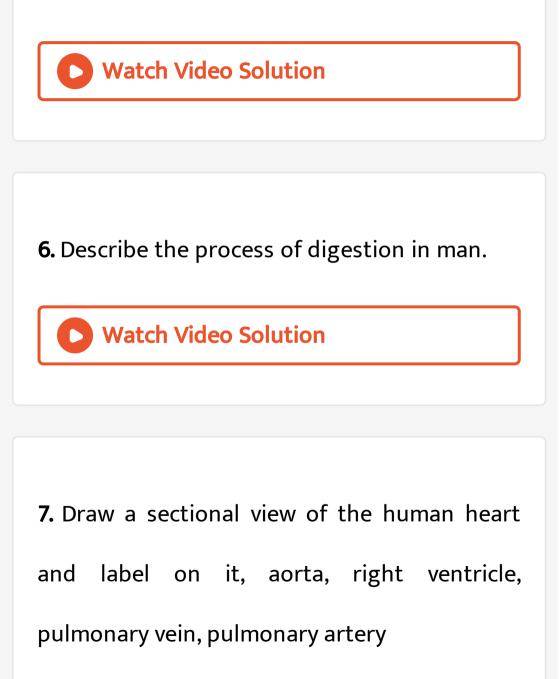
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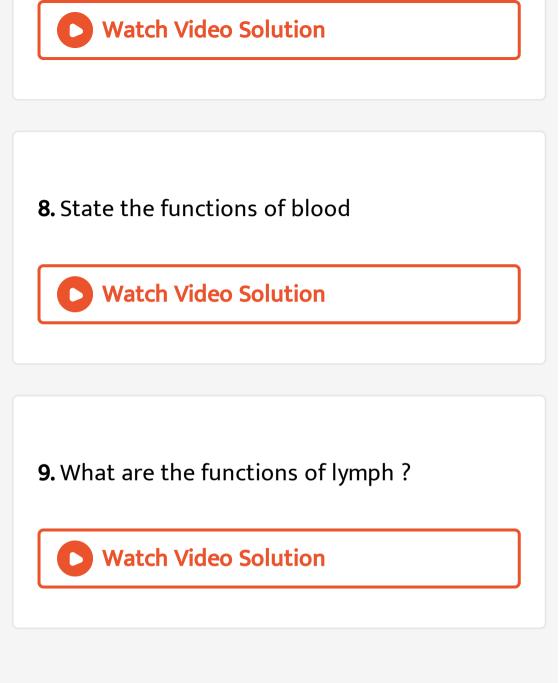
5. Differentiate between

Blood and lymph

Basophils and eosinophils

tricuspid and bicuspid valve





10. Draw a neat and well labelled diagram of

human excretory system.

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11. Show break down of glucose by various pathways.



12. Give an experiment to prove that CO_2 is

necessary for photosynthesis.

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Life Processes Multiple Choice Questions

1. To prepare a good lemporary mount of the petunia leaf peel showing many stomate, the student has to get the peel from the :

A. lower surface of the leaf

B. tip of the leaf

C. point of attachment of the leaf to its

petiole.

D. upper surface of the leaf

Answer: A

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2. Which of the following element is essential

for the formation of protein?

A. N_2

B. Na

C. Ca

D. Fe

Answer: A

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3. Instant source of energy is _____

A. Sucrose

B. Fats

C. Glucose

D. Amino acids

Answer: C

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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. Blood from superior vena cava flows into

A. Right atrium

B. Right ventricle

C. Left atrium

D. Left ventricle

Answer: A

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6. 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



7. The doctor measured Ravi's blood pressure and said it is normal now. The range of Ravi's

blood pressure (systolic/diastolic) is likely to

be -

A. 120/80 mm of Hg

B. 160/80 mm of Hg

C. 120/60 mm of Hg

D. 180/80 mm of Hg

Answer: A

8. Observe the given graphical representation
below and answer the given question
Among A, B and C the products of respiration
in A is likely to be -

A. Alcohol, CO_2 , and 36 ATP

B. CO_2, H_2O , and 36 ATP

C. Alcohol, CO_2 , and 2 ATP

D. Lactic acid, CO_2 , and 2 ATP

Answer: C

9. If the structure marked X in the diagram given below is blocked then which of the processes will not occur?

A. Transpiration and respiration

B. Transpiration, photosynthesis and

respiration

C. Respiration, transpiration and

transportation

D. Respiration and photosynthesis



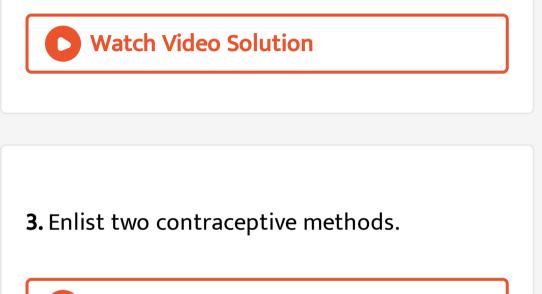


Reproduction Very Short Answer

1. Name the artificial propagation method used for the propagation of (a) rose plants and (b) apple tress.

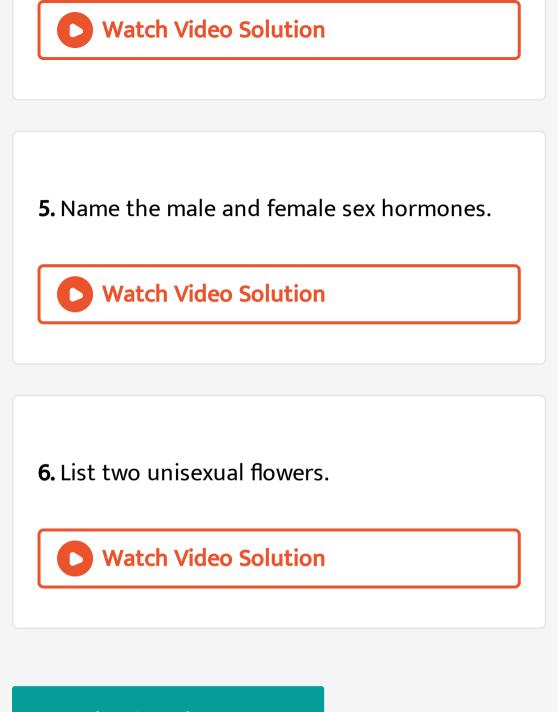
2. Why is reproduction essential for living

organisms?



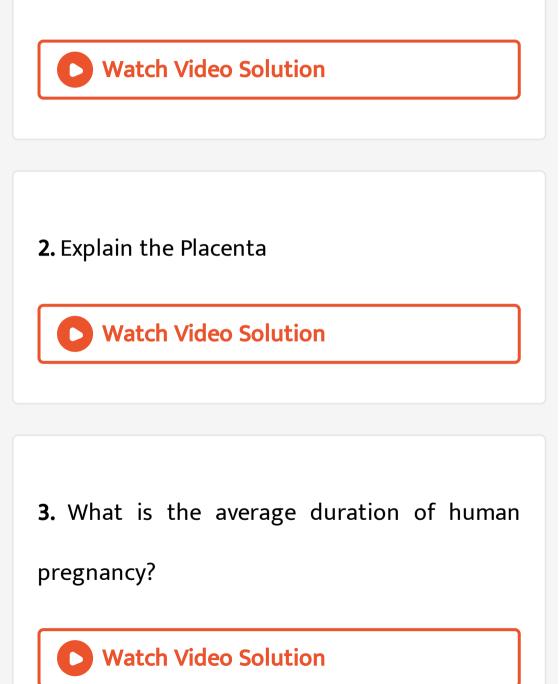
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4. What is the effect of DNA copying which is not perfectly accurate in the reproductive process?



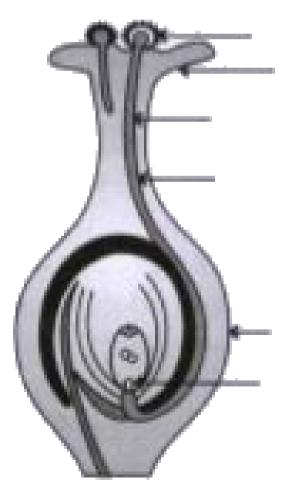
Reproduction Short Answer

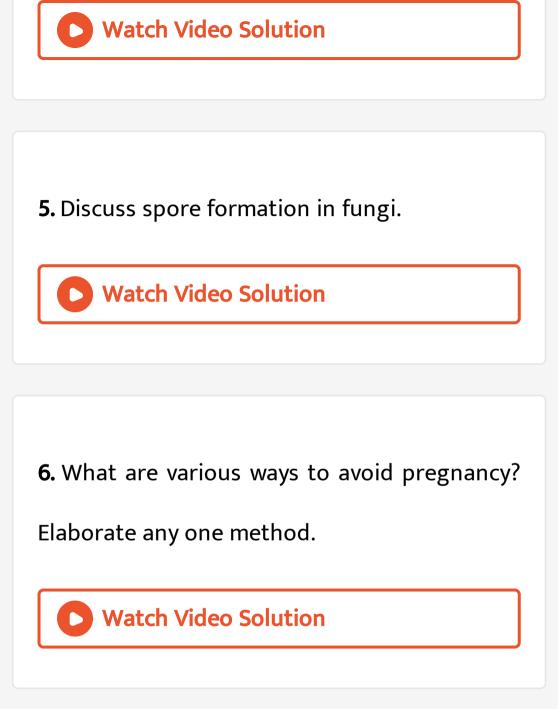




4. (i) Label the following diagram.

(ii) Which process is being shown in the diagram?





7. Define vegetative propagation. List its methods and advantages.
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8. What is placenta? Mention its role during

pregnancy.



9. Draw a labeled diagram of male reproductive system.
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10. Draw a labelled diagram of a human female reproductive system and explain the function

of each organ.

11. Explain Binary Fission in Amoeba and Multiple fission in Plasmodium.
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12. How will an organisms be benefited it it

reproduces through spores?

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13. What is reproduction? Lists its two types.



14. How is reproduction in leishmania different from that in plasmodium though both are unicellular?

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15. Which part of the flower changes into seed

after fertilization?

16. Can you consider cell division as a type of reproduction in unicellular organism? Give one reason.



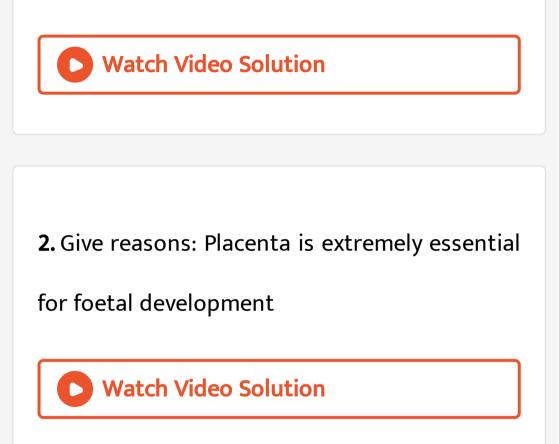
17. Name a surgical contraceptive method in

case of females.

18. The unfertilised egg always has one		
chromosome.		
Watch Video Solution		
19. Animals produce gametes which fuse to		
form a		
Watch Video Solution		

Reproduction Long Answer

1. Write the functions of placenta.



3. Give reasons: Blocking of vas-deferens prevents pregnancy.



4. Give reasons: Wind acts as a pollinating

agent.

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5. Give reasons: Use of condoms prevents

pregnancy.

6. Give reasons: Blocking of Fallopian tubes

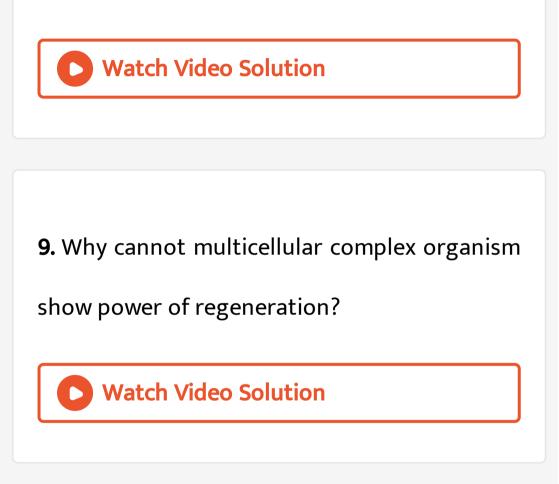
prevents pregnancy.



7. Draw the diagram of a flower and label the four whorls. Write the names of gamete producing organs in the flower.

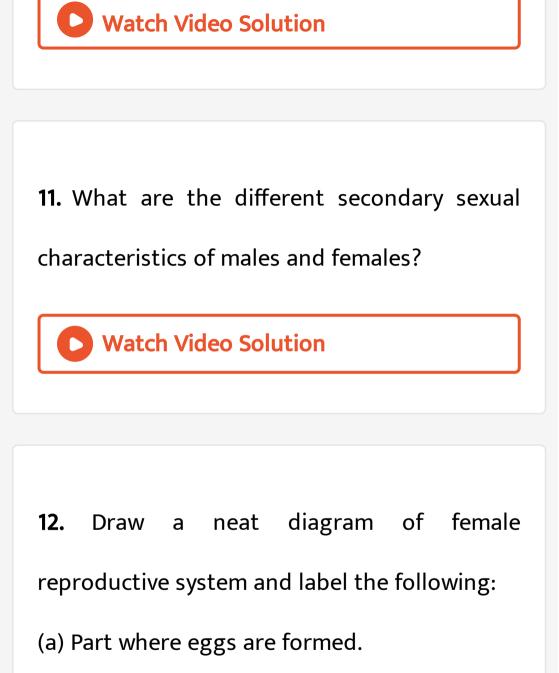


8. Explain regeneration in Planaria.



10. Draw a well labelled diagram to show the

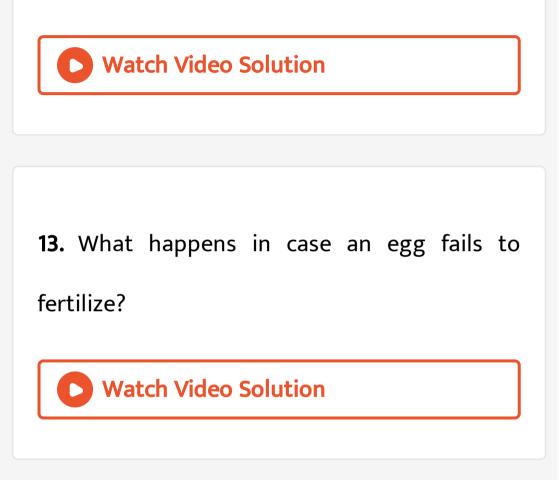
process of fertilization in flower.



(b) Site of fertilization.

(c) Place of implantation.

(d) Place for entry of sperms.



14. Give one method to prevent both STD and

unwanted pregnancy.



15. Mrs. Seghal's family was very happy after the birth of their second child. Her friend, Mrs. Raman suggested her to undergo tubectomy. What is tubectomy?



16. Mrs. Seghal's family was very happy after the birth of their second child. Her friend, Mrs.

Raman suggested her to undergo tubectomy.

Why do you think Mrs. Raman gave her such a

suggestion?

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17. Mrs. Seghal's family was very happy after the birth of their second child. Her friend, Mrs.Raman suggested her to undergo tubectomy.Can tubectomy prevent spread of sexually transmitted diseases?



18. Mrs. Seghal's family was very happy after the birth of their second child. Her friend, Mrs. Raman suggested her to undergo tubectomy. Give reason for your answer. Why is there a need of adopting contraceptive methods?



Reproduction Multiple Choice Questions

 When an organism breaks into a number of parts and each part develop into an individual, it is called :

- A. Regeneration
- B. Budding
- C. Binary fission
- D. Spore formation

Answer: A



2. How many chromosomes are present in a

ovum of human being?

A. 29

B. 21

C. 22

D. 23

Answer: D

3. The number of chromosomes in parents and offsprings of a particular species remains constant. due to

A. doubling of chromosomes after zygote

formation

B. halving of chromosomes during gamete

formation

C. doubling of chromosomes after gamete

formation

D. halving of chromosomes after gamete

formation

Answer: B



4. In a flower, the parts that produce male and

female gametes (germ cells) are

A. stamen and anther

B. filament and stigma

C. anther and ovary

D. stamen and style

Answer: C



5. In the list of organisms given below, those

that does not reproduce by the asexual method are ____

A. spirogyra

B. dog

C. yeast

D. amoeba

Answer: B

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6. Assertion (A): Simple reproductive methods
cannot work for all multicellular organisms.
Reason (R): Multicellular organisms cannot
simply divide cell by cell.

A. Both A and R are true and R is the

correct explanation of A.

B. Both A and R are true but R is not the

correct explanation of A.

C. A is true but R is false.

D. A is false but R is true.

Answer: A

7. Assertion (A): The process of DNA copying does not result in variations.
Reason (R): No biochemical reaction is absolutely reliable

A. Both A and R are true and R is the

correct explanation of A.

B. Both A and R are true but R is not the

correct explanation of A.

C. A is true but R is false.

D. A is false but R is true.

Answer:



8. Vegetative propagation refers to formation of new plants from

A. Stem, leaves and flowers

- B. Stem, roots and flowers
- C. Stem, roots and leaves
- D. Stem, flowers and fruits

Answer: C

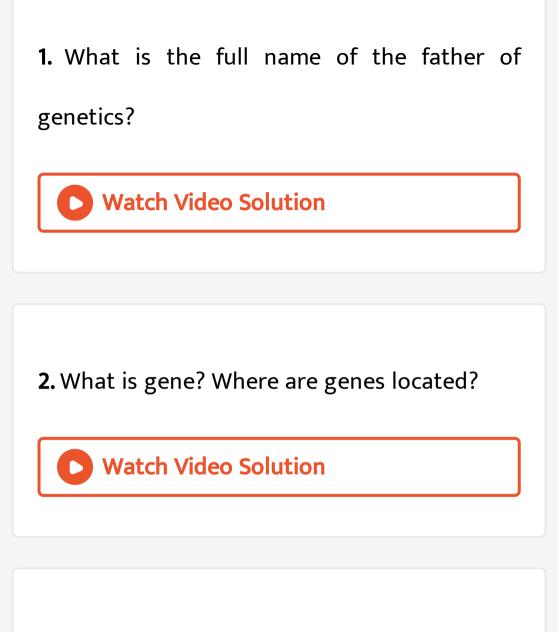


9. Which of the following is the correct sequence of events of sexual reproduction in a flower?

A. Pollination, fertilization, seedling,
embryo
B. Seedling, embryo, fertilization,
pollination

C. Pollination,	fertilization,	embryo,
seedling		
D. Embryo	seedling,	fertilization,
pollination		
Answer: C Watch Video	Solution	

Heredity And Evolution Very Short Answer



3. What is the function of a gene?

4. Newly formed DNA copies may not be identical at times. Give reason.



5. What is speciation ?-





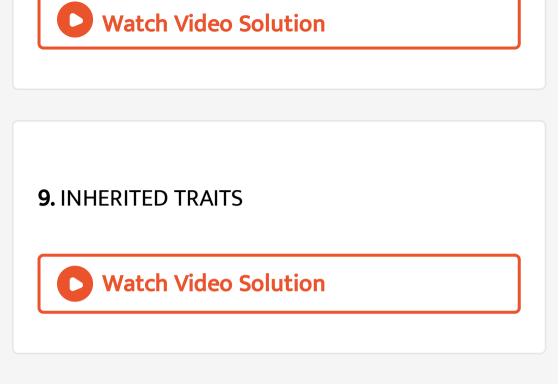
Mendelsdihybrid cross?



7. Mention any two forms of wild cabbage.

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8. Who had proposed the theory of natural selection ?



10. INHERITED TRAITS



11. Assertion: Evolution is called as organic evolution.

Reason: Evolution involves the living organisms.

A. Both assertion (A) and reason (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: A

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12. Choose the correct option: The presence of

homologous organs in different animals indicates

A. independent evolution

- B. common ancestry
- C. different ancestry

D. hierarchy

Answer: B

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13. Choose the correct option:

A farmer saves the seeds from his best maize

crop plants to sow for next year's crop.

A. artificial selection

B. genetic engineering

C. Natural selection

D. variation

Answer: A

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14. The phenomenon by which a new set of population is formed from the change in frequency of some genes is called _____



Heredity And Evolution Short Answer

1. What are the different ways in which individuals with a particular trait may increase in a population?



2. List two differences between acquired traits

and inherited traits by giving an example of

each.



3. Define the term evolution. "Evolution cannot

be equated with progress". Justify this

statement

4. What are fossils? How are they formed? Describe in brief two methods of determining the age of fossils.



5. Will geographical isolation be a major factor in the speciation of a self- pollinating plant species? Why or why not?

6. Will geographical isolation be a major factor in the speciation of an organism that reproduces asexually? Why or why not?

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7. What factors could lead to the rise of a new

species?

8. How is the sex of the child determined in

human beings?

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9. Can the wing of a butterfly and the wing of a

bat be considered homologous organs? Why

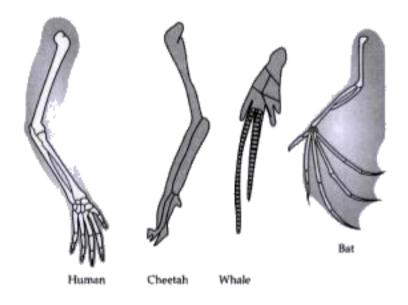
or why not?

10. Mention the total number of chromosomes along with the sex chromosomes that are present in a human female and a human male. Explain how in sexually producing organisms the number of chromosomes in the progeny remains the same as that of the parents.

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11. What do you think is depicted in the figure below? What information do they give us

about evolution? Both butterfly and birds have wings for flight. Are they closely related to each other with ?Why?





Heredity And Evolution Long Answer

1. Mention the function of cellular DNA. Taking

tallness as a characteristic for a plant, explain

how proteins control the characteristic.

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2. A group of grass hoppers - some green and some brown lived in grassland having dry bushes and dry grass.

Which one would normally be picked up by

predatory birds and why?

3. A group of grass hoppers - some green and some brown lived in grassland having dry bushes and dry grass.
Population of which grasshopper will

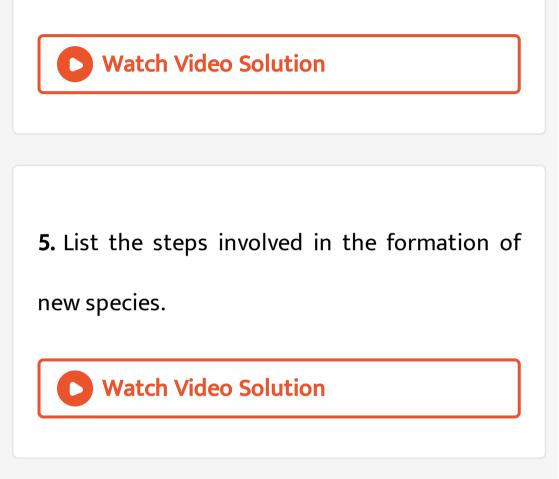
increase?

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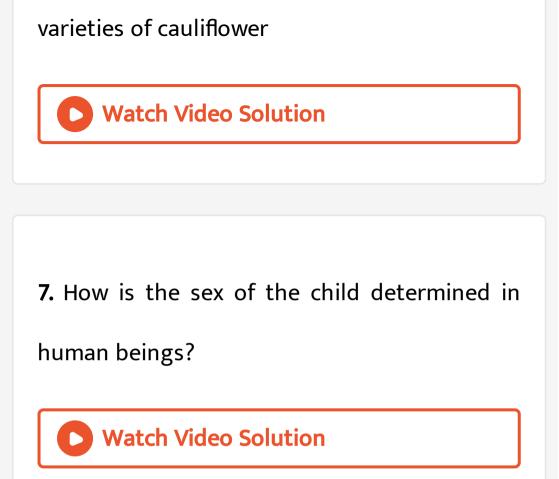
4. A group of grass hoppers - some green and some brown lived in grassland having dry

bushes and dry grass.

Name this phenomenon



6. Explain giving examples how artificial selection has helped in the formation of newer



8. Given reason why acuired characters are not

inherited.



9. Evoluation has exhibited a greater stability of molecular structure when compared with morphological structures. Comment on the statement and justify your opinion.

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10. Caucasoid (white), Mongoloid (yellow), Negroid (black) and Australoid might have evolved from a common ancestor. Provide a

few evidences in support of this view.



11. How sexual reproduction creates genetic variation which is needed for better adaptation to changing environment? Provide a suitable explanation.

12. Does geographical isolation of individuals of a species lead to formation of a new species? Provide a sutiable explanation.



HeredityAndEvolutionMultipleChoiceQuestions

1. Human being belongs to the species of

a) Homo habillis

b) Hominidae

c) Homo sapiens

d) Homo erectus

A. Homo habillis

B. Hominidae

C. Homo sapiens

D. Homo erectus

Answer: C

2. Which of the following is not a direct conclusion that can be drawn from Mendel's Experiment ?

a) Only one parental trait is expressed

 b) Two copies of each trait is inherited in sexually reproducing organism

c) For recessive trait to be expressed, both copies should be identical

d) Natural selection can alter frequency of an inherited trait.

A. Only one parental trait is expressed

B. Two copies of each trait is inherited in

sexually reproducing organism

C. For recessive trait to be expressed, both

copies should be identical

D. Natural selection can alter frequency of

an inherited trait.

Answer: D

3. Name the organ analogous to the wings of birds

A. Forelimb of human

B. wings of insect

C. Fore-leg of horse

D. none of these

Answer: B

4. Which of the following is not a direct conclusion that can be drawn from Mendel's Experiment?

- A. Only one parental trait is expressed
- B. Two copies of each trait are inherited in

sexually reproducing organism

C. For recessive trait to be expressed, both

copies should be identical

D. Natural selection can alter frequency of

an inherited trait

Answer: D



5. What is the probability that the male progeny will be a boy?

A. 50~%

B. 56 %

 $\mathsf{C.}\,47.43\,\%$

D. It varies





6. With whom you can associate theory of evolution?

A. Charles Darwin

B. Mendel

C. Stanley Miller

D. Harold Urey

Answer: A



7. Harish went with his mother to the market and bought carrots, tomatoes, radish and potato from a vegetable vendor. Which of these vegetables represent homologous structures?

A. Carrot and potato

B. Potato and radish

C. Radish and carrot

D. Tomato and potato

Answer: C

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Environment Very Short Answer

1. List two natural ecosystems.

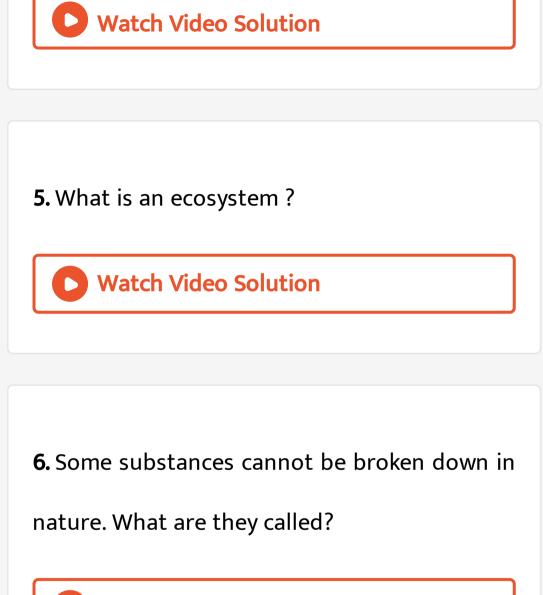
2. Which gas is produced due to incomplete combustion of fuel?
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3. Why is excessive use of CFCs a cause of

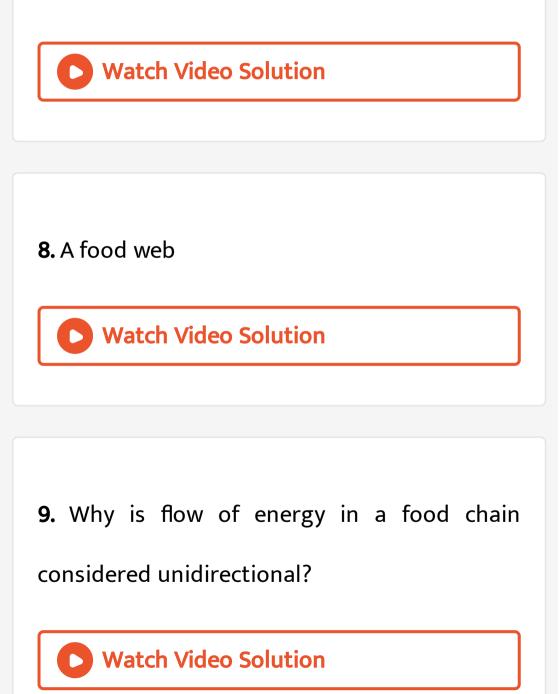
concern?



4. What is 10 per cent law ?



7. What has led to formation of ozone holes?



10. Assertion: A network of food chain existing together in an ecosystem is known as food web.

Reason: An animal like kite cannot be a part of a food web.

A. Both assertion (A) and reason (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: C

11. Assertion : Green plants of the ecosystem are the transducers.

Reason : Producers trap the radiant energy of

the sun and change it into chemical energy.

A. Both assertion (A) and reason (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: A

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12. Replacing of plastic cups by the paper cups

for selling tea on train is preferred because

A. paper cups are more aesthetic

- B. paper cups are more hygienic
- C. paper cups are cheaper
- D. paper cups are biodegradable and eco-

friendly

Answer: D

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13. Trophic levels are formed by

A. only plants

B. only animals

C. only carnivores

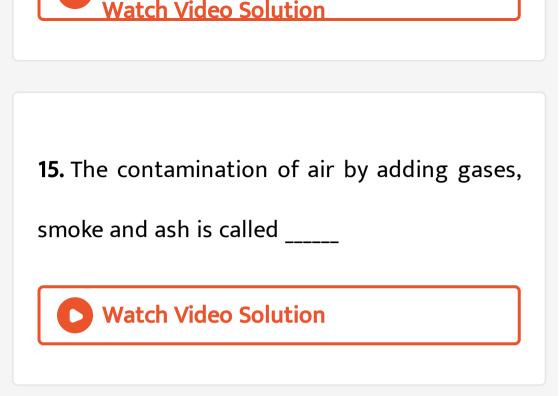
D. organisms linked in foodchain

Answer: D

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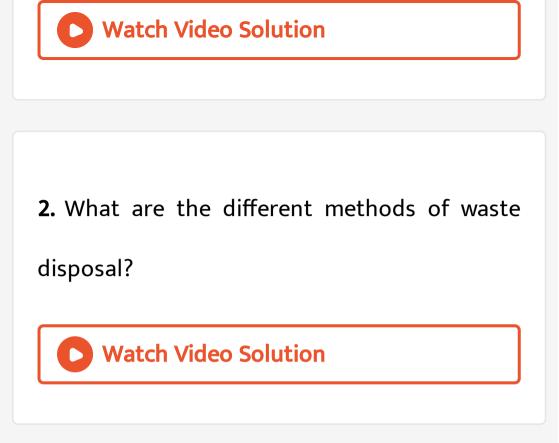
14. Gardens and cropfields are examples of





Environment Long Answer

1. What is biological magnification? Will the levels of this magnification be different at different levels of the ecosystem?



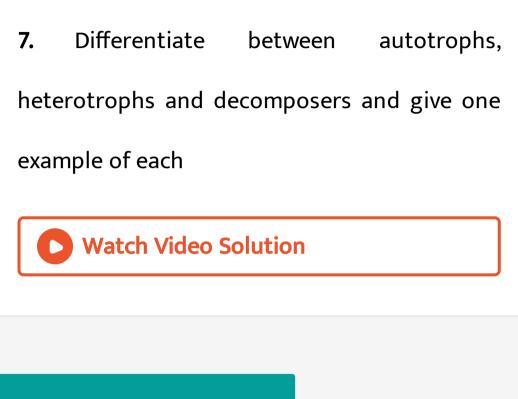
3. "Vegetarian food habits can sustain a larger number of people."Justify the statement in terms of food chain.

4. State one important function of ozone layer in the atmosphere. How is it formed there? Which compounds are responsible for the depletion of ozone layer? How do these compounds enter into the atmosphere



5. List three environmental friendly practices which you would like to form a part of your daily habits giving justification for each. 6. Monika was observing a lizard on the wall which chased an insect and ate it. She felt that lizard is cruel and ugly. Suddenly the lizard fell and was eaten by a cat. She started thinking, how organisms are connected to each other for their food? What is a food chain? Will the world be a better place without lizards? Make a food chain of five organisms.

To which trophic level does the lizard belong



Environment Short Answer

1. We often observe domestic waste decomposing in the bylanes of residential

colonies. Suggest ways to make people realise

that the improper disposal of waste is harmful

to the environment.

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2. The activities of man had adverse effects on ail forms of living organisms in the biosphere. Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of himself but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco dub' of your school which is creating environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings. Why is it necessary to conserve our

environment?



3. The activities of man had adverse effects on all forms of living organisms in the biosphere. Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of himself but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating

environmental awareness amongst the school students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings. State the importance of green and blue dust bins in the safe disposal of the household

waste.



4. The activities of man had adverse effects on all forms of living organisms in the biosphere. Unlimited exploitation of nature by man disturbed the delicate ecological balance between the living and non-living components of the biosphere. The unfavourable conditions created by man himself threatened the survival not only of himself but also of the entire living organisms on the mother earth. One of your classmates is an active member of 'Eco club' of your school which is creating environmental awareness amongst the school

students, spreading the same in the society and also working hard for preventing environmental degradation of the surroundings.

List two values exhibited by your classmate who is an active member of Eco- club of your school.

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5. We do not clean ponds or lakes, but an

aquarium needs to be cleaned. Why?





6. Accumulation of harmful chemicals in our bodies can be avoided. Explain how this can be achieved ?

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7. What are the problems caused by the non-

biodegradable wastes that we generate?

8. Why is damage to the ozone layer a cause for concern? What steps are being taken to limit this damage?



9. Differentiate between food chain and food

web with one example.



10. If all the waste we generate is biodegradable, will this have no impact on the environment?



11. What is ozone and how does it affect any

ecosystem?

12. What is the role of decomposers in the ecosystem?
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13. What are tropic levels ? Give an example of a food chain and state the different trophic levels in it.

14. Why are some substances biodegradable

and some non-biodegradable?

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Environment Multiple Choice Questions

1. Accumulation of non-biodegradable pesticides in the food chain in increasing amount at each higher trophic level is known

- A. Eutrophication
- **B.** Pollution
- C. Bio-magnification
- D. Accumulation

Answer: C



2. In the given food chain, suppose the amount of energy at fourth trophic level is 5 kJ, what will be the energy available at the

producer level?

 $\mathsf{Grass} \ \rightarrow$

Grasshopper \rightarrow

Frog \rightarrow Snake \rightarrow

Hawk

A. 5 kJ

- B. 50 kJ
- C. 500 kJ
- D. 5000 kJ

Answer: D





3. Which one of the following is an artificial ecosystem ?

A. Pond

B. Crop field

C. Lake

D. Forest

Answer: B

4. Which of the following is not an example of abiotic factors

A. Light

B. Plants

C. Heat

D. Temperature

Answer: B

5. Which of the following are environment-friendly practices?

A. Carrying cloth-bags to put purchases in

while shopping

B. Switching off unnecessary lights and

fans

C. Walking to school instead of getting

your mother to drop you on her scooter

D. All of the above

Answer: D



6. Which of the following constitute a food-chain?

A. Grass, wheat and mango

B. Grass, goat and human

C. Goat, cow and elephant

D. Grass, fish and goat



