

Biology Important questions

Our environment

- 1) Define ecosystem.
- 2) What are the different components of which an ecosystem is composed of?
- 3) Differentiate between biodegradable and non –biodegradable waste.
- 4) Give examples of natural and artificial ecosystem.
- 5) Where do plants get each of the raw materials if required for photosynthesis?
- 6) Give the ways in which biodegradable and non biodegradable waste affect the environment
- 7) Explain 10 percent law with the help of example.
- 8) Differentiate between phytoplankton and zooplanktons.
- 9) Explain the significance of food web in eco system.
- 10) What are decomposers? Explain the role of decomposers in the environment?
- 11) What will happen if all the decomposers would be eliminated from the world?
- 12) What is biological Magnification?
- 13) Why we say that energy flow in the biosphere is unidirectional?
- 14) "All the flesh of carnivore is grass" Justify the statement.
- 15) State the importance of ozone layer for the mankind. How it is formed? Why damage to the ozone layer is a cause of concern?
- 16) How is ozone formed?
- 17) "Vegetarian food habits can sustain a larger no. of people" justify the statement in the terms of food chain.
- 18) Differentiate between Autotrophs and hetrotrophs.

MANAGEMENT OF NATURAL RESOURCES

1. List two traditional system of water harvesting. (CBSE 2008 F)
2. List four changes you would incorporate in your life cycle in a move towards sustainable use of available resources. (AI CBSE 2008,2009 F)
3. State two reasons of each of conserving(AI CBSE 2008)
 - a. Forest
 - b. Wild life
4. What are natural resources? State two factors that work against an equitable distribution of these resources. (AI CBSE 2009)
5. Why must we conserve our forests? List any two causes for forestation taking place. (AI CBSE 2009)
6. What is Chipko Movement? Why should we conserve forests? (AI CBSE 2009)
7. List four advantage of water harvesting. (AI CBSE 2009)
8. How do advantages of exploiting natural resources with short term aims differ from the advantages of managing our resources with a long term perspective? (CBSE 2009 F)
9. What is wild life? How is wild life important for us? (CBSE 2009 F)
10. List any two causes of our failure to sustain availability of underground water. (CBSE 2009)

HOW DO ORGANISMS REPRODUCE?

1. What are different methods of reproduction?
2. Name two plants that are bisexual.
3. What is pollination/.
4. When does DNA copying occur?
5. How does the embryo get nourishment?
6. What is STD? Name two STDs.
7. Explain process of sexual reproduction in plants.
8. With the help of diagrams explain process of budding in Hydra.
9. Name the one unisexual plant.
10. Name on organism that grows by multiple fission.
11. Name two plants that are grown by vegetative propagation. (CBSE 2016)
12. What is reproduction? Explain two advantages of sexual reproduction over asexual reproduction (CBSE 2016)

13. What is reproduction? Mention the importance of DNA copying in reproduction. (CBSE 2008)
14. List any two differences between pollination and fertilization. (CBSE2008)
15. Name two sexually transmitted disease caused due to infection and viral infection. How it can these be prevented? (AI 2008)
16. Explain the terms:
 - a. Implantation
 - b. Placenta
 - c. What is the average duration of human pregnancy? (CBSE 2009)
17. Why is DNA copying is an essential part of the process reproduction? (AI 2009)
18. List any four methods of contraception used by humans. How does their use have a direct effect on the health and prosperity of a family? (CBSE 2015)
19. Define the terms pollination and fertilization. Draw a diagram of a pistil showing pollen tube growth into the ovule and label them:
20. Describe in brief the role of (i) testis (ii) seminal vesicle, (iii) vas deferens, (iv) ureter and (v) prostate gland in human male reproductive system (CBSE 2012)
 - a. Draw a diagram of the longitudinal section of a flower and label on it sepal, petal, ovary and stigma.
21. Write the names of male and female reproductive parts of a flower.
22. What is fragmentation in organisms? Name a multicellular organism which reproduces by this method.
23. What is regeneration in organism? Describe regeneration in Planaria with the help of a suitable diagram. (CBSE 2011)
24. How is the process of pollination different from fertilization?
25. What are the different methods of contraception?

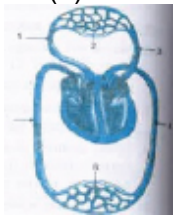
Heredity and evolution

1. Define heredity
2. "Variation is necessary for organic evolution". Justify
3. Describe law of dominance.
4. State the second law of Mendel. What name is given to this law?
5. Describe the dihybrid cross performed by Mendel.
6. How is the sex of a child determined in humans?
7. What is natural selection? Describe the process with the help of suitable diagram.
8. Explain genetic drift with the help of an example.
9. Describe in detail how speciation occurs?
10. "We cannot pass on to our progeny the experiences and qualifications earned during our life time". Justify the statement giving reason and examples. (CBSE 2015)
11. How many pairs of chromosomes are present in human beings? Out of these how many are sex Chromosomes? How many types of sex chromosomes are found in human beings? "The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it". Draw a flow chart showing determination of sex of a newborn to justify this statement. (CBSE 2015)
12. Tabulate two distinguishing features between acquired traits and inherited traits with one example of each. (CBSE2013)
13. "The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it." Justify this statement with the help of flow chart showing determination of sex of a newborn. (CBSE 2013)
14. A cross was made between pure breeding pea plants one with round and green seeds and the Other with wrinkled and yellow seeds.
 - a. Write the phenotype of F1 progeny. Give reason for your answer.
 - b. Write the different types of F2 progeny obtained along with their ratio when F1 progeny was selfed (CBSE 2014)
15. Define the term evolution. "Evolution cannot be equated with progress". Justify this statement (CBSE 2012)
16. Distinguish between homologous organs and analogous organs. In which category would you place wings of a bird and wings of a bat? Justify your answer giving a suitable reason. (CBSE 2012)
17. Explain the terms:
 - (i) Speciation (ii) Natural selection (CBSE 2011)

18. Explain Mendel's law of independent inheritance. Give one example (CBSE 2011)
19. Give the evidence that the birds have evolved from reptiles.
20. Insects, octopus, planarian and vertebrates possess eyes. Can we group these animals together on the basis of eyes that they possess? Justify your answer giving reason. (CBSE 2014)

Life Processes

1. In human alimentary canal, name the site of complete digestion of various components of food. Explain the process of digestion. [CBSE (CCE) 2012]
2. List in tabular form, three differences between arteries and veins. [CBS (CCE) 2012]
3. List the three kinds of blood vessels of human circulatory system and write their functions in tabular form. [CBSE I CCE) 2012]
4. (a) "The breathing cycle is rhythmic whereas exchange of gases is a continuous process". Justify this statement.
(b) What happens if conducting tubes of circulatory system develops a leak? State in brief, how could this be avoided?
(c) How opening and closing of stomata takes place? [CBSE (CCE) 2011]
5. Draw a diagram of the front view of human heart and label any six parts including at least two that are concerned with arterial blood supply to the heart muscles. [CBSE (CCE) 2011]
6. Describe in brief the function of kidneys, ureters, urinary bladder and urethra. [Foreign 2010]
7. Explain the process of breakdown of glucose in a cell
(i) in the presence of oxygen,
(ii) in the absence of oxygen. [HOTS, Foreign 2010]
8. (i) Label any 4 parts in the given diagram.
(h) What are the two functions represented in this diagram?



[HOTS, CBSE Sample Paper 2009]

9. What is double circulation in human beings? Why is it necessary? [HOTS, NCERT, Delhi 2008C]
10. (a) Name two different ways in which glucose is oxidised to provide energy in various organism.
(b) Write any two differences between the two oxidation of glucose in organisms. [AI 2008]
11. Write any three differences between aerobic and anaerobic respiration. [HOTS, NCERT Exemplar, NCERT, AI 2008]
12. (a) Name the process by which autotrophs prepare their food.
(b) List the three events which occur during this process.
(c) State two sources from which plants obtain nitrogen for the synthesis of proteins and other compounds. [Foreign 2008]

Other important questions

- Q. 1. What are life processes?
- Q. 2. What outside raw materials, are used for life by an organism?
- Q. 3. What are enzymes?
- Q. 4. Explain the action of saliva secreted from salivary glands on the food?
- Q. 5. Name the common process, both in the aerobic and anaerobic respirations?
- Q. 6. Name the products produced by the fermentation of glucose by the yeast cell?
- Q. 7. Why is it necessary to separate oxygenated and deoxygenated blood in mammals and birds?
- Q. 8. Name the functional unit of human kidney?
- Q. 9. The xylem in plants is responsible for _____.
- Q. 10. Define photosynthesis.

- Q. 11. What substances are contained in the gastric juice? What are their function?
- Q. 12. What are the various processes that take place in the duodenum?
- Q. 13. What the different types of heterotrophic nutrition?
- Q. 14. Show by experiment that sunlight is necessary for photosynthesis?
- Q. 15. Name the type of respiration in which the end products are: _____.
- Q. 16. Describe the process of anaerobic respiration?
- Q. 17. Distinguish between breathing and respiration?
- Q. 18. Differentiate between artery and vein?
- Q. 19. Give examples of solid, liquid and gaseous wastes in plants?
- Q. 20. Explain the nutrition process in amoeba?
- Q. 21. Write important functions of blood?
- Q. 22. Describe double circulation in human beings. Why is it necessary?
- Q. 23. Compare the functioning of an alveolie in lungs and nephrons in the kidneys with respect to their structure and functioning?
- Q. 24. Explain the mechanism of the circulation of blood in human body?
- Q. 25. What criteria do we use to decide wheather something is alive?
- Q. 26. What is the role of acid in our stomach?
- Q. 27. How is oxygen and carbon dioxidetransported in human beings?
- Q. 28. What are the component of the transport system in human beings? What are the functional of these components?
- Q. 29. What are the components of the transport system in highly organised plants?
- Q. 30. Describe the structure and functioning of nephrons?
- Q. 31. How is the amount of urine produced regulated?
- Q. 32. What is the role of saliva in the digestion of food?

Control and Coordination

- Q. 1. Why does living organisms show movement?
- Q. 2. Name the organs of our peripheral nervous system?
- Q. 3. What happens at the synapse between two neurons?
- Q. 4. What are nastic movements?
- Q. 5. Give an example of plant hormone that promotest growth?
- Q. 6. Which signals will get disturbed in case of a spinal cord injury?
- Q. 7. What is the role of brain in reflex action?
- Q. 8. Why are some patients of diabetes treated by giving injections of insulin hormone?
- Q. 9. What is the need for a system of control and co-ordination in an organism?
- Q. 10. Differentitate between endocrine gland and dexocrine gland?
- Q. 11. Write some characteristics of hormones of animals?
- Q. 12. Compare and contrast nervous and hormonal mechanisms for control and co-ordination in the animals?
- Q. 13. Give various functions performed by plant hormones?
- Q. 14. What is reflex action and reflex arc? Explain with the help of examples:
- Q. 15. Give the various functions of brain?
- Q. 16. What is the difference between reflex action and walking?