

## Important questions for Class XI

Subject: Biology

Group A ( Botany)

A. Very short questions – (1 mark )

1. What is cell cycle?
2. What is crossing over?
3. Name two DNA containing cell organelles.
4. Why is lysosome called suicidal bag?
5. Write the full form of SER and RER.
6. Name the components of DNA.
7. How does *Spirogyra* get its name?
8. What are elaters?
9. State the function of akinete in *Spirogyra*.
10. What is the function of gemma cup in *Marchantia*?
11. Define Sporophyte.
12. Define Gymnosperm.
13. Why are fungi called natural scavengers?
14. What does it mean by taxonomy?
15. Who is known as father of taxonomy?
16. Define binomial nomenclature.
17. Name the fruit of family Cruciferae.
18. What is food chain?
19. Define ecological pyramid.
20. State about predation.
21. What is antibiosis?

B. Short questions- (3 marks)

1. Differentiate between prokaryotic and eukaryotic cell.
2. Explain the structure of a mitochondrion.
3. Discuss the structure and types of lysosome.
4. Write six main differences between mitotic and meiotic cell division.
5. Describe the sporophyte of *Marchantia*.
6. Give an account of sexual mode of reproduction in *Mucor*.
7. Explain the carbon cycle in nature.
8. Describe the advantage of five kingdom system of classification over two kingdom system of classification.
9. Give differences between ray floret and disc floret of Compositae family.
10. What do you mean by ecological Pyramid? Describe the types of ecological pyramid found in ecosystem.
11. Describe consequences of green house effects.

C. Long questions- (7.5 marks)

1. Describe the structure and reproduction in *Spirogyra*.
2. Give the economic importance of bacteria

3. Give the distinguishing characters of Cruciferae with floral formula and floral diagram. Mention any four important plants of this family.
4. Describe the family Solanaceae with necessary diagrams and mention the scientific name of any three plants of this family.
5. Describe the family of Papilionaceae with necessary diagram, floral formula, floral diagram and mention the scientific names of four plants belonging this family.
6. Define alternation of generation. Describe the alternation of generation in Fern.

D. Long questions- (8 marks)

1. Describe the process of meiosis and mention its significances.
2. What is ecosystem? Describe the functional aspects of pond ecosystem.
3. What is bio-geo-chemical cycle? Discuss the nitrogen cycle taking place in nature.

Group B(Zoology)

A. Very short questions- (1mark)

1. Define Ichthyology / Epidemiology / Entomology.
2. What are coacervates ?
3. What are the end products of Miller & Urey's experiment?
4. What is the unit of evolution according to Neo- Darwinism?
5. What is meant by exflagellation ?
6. What was the cranial capacity of Java-man ?
7. Who first explain the origin of human ?
8. What are vestigial organs? Give two examples of human vestigial organ .
9. What is the function of trichocyst in *Paramecium* ?
10. Mention any two species of human malarial parasite .
11. Name the excretory organs of flat worms.
12. What are tube feet?
13. Define polymorphism.
14. What do you mean by poikilothermic animals ?
15. Give the position of brain in earthworm.
16. Define the term hibernation.
17. Give the function of carotid labyrinth in frog.
18. What is amplexus ?
19. What are pesticides ?
20. Define Rheotaxis.
21. Name the smallest National park of Nepal. Mention its area.

B. Short questions -(3 marks)

1. Discuss the relationship of Biology with other Sciences.
2. Give the diagrammatic representation of Miller and Urey's experiment.
3. What are homologous organs ? How do they support organic evolution ?
4. Describe the erythrocytic schizogony of *Plasmodium vivax* .

5. Discuss briefly the chemogeny of Oparin and Haldane's theory.
6. List the characteristic features of Arachnida with examples
7. Write a note on cocoon formation in Earthworm.
8. Differentiate between Chondrichthyes and Osteichthyes.
9. Describe the histological structure of lung of Frog.
10. Explain the significance of bird migration.
11. Mention the causes of extinction of wildlife.

C. Long questions- (7.5 marks)

1. Describe the sexual life cycle of *Plasmodium* with well labelled diagram.
2. Define conjugation. Describe the process of conjugation in *Paramecium* with necessary diagrams.
3. Describe the digestive organs of Earthworm with well labelled diagram.
4. Give an account of reproductive organs of *Pheretima* with a labelled diagram.
5. Describe the alimentary canal of frog with necessary diagrams.
6. Describe the internal structure of heart of Frog with a labelled diagram. Explain briefly its working mechanism.

D. Long questions (8 marks)

1. Discuss Lamarck's theory of "Inheritance of Acquired Characters" with examples.
2. Explain Darwin's theory of natural selection with suitable examples.
3. Discuss the evolution of human from his hominid group.

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