

ACCELERATED LEARNING PROGRAMME (ALP)
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11th CLASS BIOLOGY GUESS PAPERS

CHAPTER NO. 1 INTRODUCTION OF BIOLOGY

SHORT QUESTIONS:

1. How does theory differ from law?
2. Differentiate between deductive reasoning and inductive reasoning.
3. What is biological control of pest?
4. What is hydroponic culture technique? Give its uses.
5. Define microbiology and biotechnology.
6. What is “Integrated disease management”.
7. Differentiate between chemotherapy and radiotherapy.
8. Compare radiotherapy and gene therapy to control diseases.
9. Differentiate between gene therapy and chemotherapy.
10. What is cloning? Write one method of cloning.
11. Differentiate between bio control and bioremediation.

LONG QUESTIONS:

1. How study of Biology helped mankind to improve production of food.
2. Define cloning discuss its types and the commercial importance of the technique.
3. Describe the role of drug treatment and gene therapy in disease control.
4. Give advancement OR importance of biology in production of food.
5. Write in detail, drug treatment and gene therapy.
6. Write a note on protection and conservation of environment.

CHAPTER NO. 2 BIOLOGICAL MOLECULE.

SHORT QUESTIONS:

1. Differentiate between anabolism and catabolism.
2. Define heat of vaporization. What is heat of vaporization of water?
3. Define heat capacity and give its advantage.
4. What are lipids? Give two functions of waxes.
5. What is heat capacity of Water? Give its importance.

6. Differentiate between Amylose and amylopectin starches.
7. Sketch Ribofuranose and Glucopyranose
8. Give general formula for an Amino Acid.

9. What are conjugated molecules?

LONG QUESTIONS:

1. Explain Structure of protein.
2. Differentiate between fibrous and globular proteins.
3. Discuss primary and secondary structure of proteins
4. What are polysaccharides? Describe its different types.
5. Describe Acylglycerols in detail.
6. Write a note primary structure of protein.

CHAPTER NO. 3

ENZYMES SHORT QUESTIONS:

1. Distinguish between prosthetic group and coenzyme.
2. Differentiate between Apo enzyme and holoenzyme.
3. What is cofactor? Give its role.
4. What is induced fit model of enzyme action?
5. Discuss lock and key model of enzyme action. What is lock and key model say about substrate enzyme interaction.
6. Differentiate OR compare competitive and non-competitive inhibitors.
7. Differentiate between reversible and Irreversible Inhibitors.
8. What are competitive Inhibitors?
9. Give any two characteristic of enzymes.
10. What is difference between pepsin and pepsinogen?
11. What do you know about prosthetic group?
12. What is enzyme to enzyme chain?

LONG QUESTIONS:

NO LONG QUESTIONS IN THIS CHAPTER

CHAPTER NO. 4 THE CELL

SHORT QUESTIONS:

1. Difference between endocytosis and exocytosis.
2. Differentiate between phagocytosis and pinocytosis.
3. Give two functions of smooth endoplasmic reticulum
4. What are storage diseases? Give name of two storage diseases in man.
5. Differentiate between microfilaments and microtubules.
6. Differentiate between chromoplast with leucoplast.

7. What are chromosomes? Why they are important.
8. Compare composition of primary and secondary cell walls.
9. Explain briefly endocytosis.

10. Define polysome and ribosomes.
11. Give any two important functions of centrioles.
12. Write important postulates of cell theory.
13. What is magnification?
14. Give the role of vacuole in plants cell.

LONG QUESTIONS:

1. What are Lysosomes? Give their functions.
2. Give an account of structure and function of mitochondria.
3. Describe the structure and function of plasma membrane.
4. Write a detailed note on Endoplasmic Reticulum.

CHAPTER NO. 5

VARIETY OF LIFE.

SHORT QUESTIONS:

1. What is binomial nomenclature? What are two rules of nomenclature?
2. What are capsid and capsomeres?
3. What are prions
4. What are prions?
5. Define species with example
6. Give disadvantages of common names.
7. Why euglena is difficult to classify.

LONG QUESTIONS:

1. Illustrate the life cycle of Bacteriophages diagrammatically.
2. Write a detailed note on hepatitis.
3. Describe Life cycle of a Bacteriophage.
4. Explain lytic cycle of bacteriophage.
5. Discuss any two disease caused by viruses.

CHAPTER NO.6

KINGDOM PROKARYOTAE

SHORT QUESTIONS:

1. Write four postulates of germ theory of disease.
2. What are pill? Give their function.
3. Differentiate between lophotrichous and amphitrichous bacteria.
4. Name bacteria which are photosynthetic.
5. Differentiate between Gram-positive and gram-negative bacteria.
6. Name bacteria which are photosynthetic.

7. Differentiate between lag phase and log phase of growth of bacteria.
8. What are akinetes? Give their function.
9. Name different types of bacteria on the basis of flagella presence.
10. What is contribution of Louis Pasteur in microbiology?

LONG QUESTIONS:

1. Write a note on nutrition in bacteria.
2. Write physical and chemical methods to control bacteria.
3. Explain growth and reproduction bacteria.
4. Explain characteristics of Cyanobacteria.
5. Discuss about bacterial cell wall.

CHAPTER NO. 7 THE KINGDOM PROTISTA

SHORT QUESTIONS:

1. What do you know about giant amoeba? OR Write something about sponges?
2. What are choanoflagellates? OR To which cells of sponges they resemble.
3. Give the examples, form and mode of locomotion of zoo flagellates.
4. What is trypanosome? What disease does it cause?
5. Write functions of micronuclei and macronuclei of ciliates.
6. How algae differ from plants?
7. Highlight evolutionary significance of euglenoids.
8. What are kelps? Give its parts.
9. Write down four similarities between green algae and plants.
10. What is the importance of algae? Write importance of algae?
11. Write down the economic importance of Oomycetes. OR What are the Oomycetes.
12. What is the importance of Trichonympha?
13. What is Sleeping Sickness?
14. Write down two characteristics of ciliates.
15. What is Chlorella?
16. Write down the importance of Algae.
17. Write down similarities and difference between fungi and fungus like Protista.
18. What is "Phytophthora infestans"?
19. What are the basis of diversity in protista?
20. Difference between zoo flagellates and dinoflagellates.
21. Write features of Chrysophyta.
22. What do you know about Dinoflagellates?
23. Why slime molds are included in kingdom protista.

LONG QUESTIONS:

NO LONG QUESTIONS IN THIS CHAPTER

CHAPTER NO. 8

FUNGI SHORT QUESTIONS:

1. Compare lichens with mycorrhiza.
2. Differentiate between obligate and facultative parasites.
3. Differentiate between plasmogamy and karyogamy
4. What is par asexuality? OR Define par asexuality.
5. Differentiate between spore and conidia.
6. Differentiate between rust and smut. OR What are rust and smut diseases of plants.
7. Write down importance of Yeast.
8. What are aflatoxins?
9. What is histoplasmosis? Give its reasons.
10. Differentiate between septate and coenocyte hyphae.
11. What is endomycorrhizae?
12. Differentiate between plasmogamy and karyogamy.
13. How spore are differ from conidia?
14. What is par asexuality in fungi?
15. What are Mycorrhizae?
16. How asexual reproduction occurs in Fungi
17. Explain sexual reproduction in Fungi.
18. Describe and draw life cycle of Rhizopus.
19. Give an account of Ascomycota's.
20. Discuss economic gains of fungi.
21. Explain economic losses due to fungi.
22. Difference between fragmentation and budding in fungi.
23. Define rust. Give example.
24. What is ergotism? How is it caused?

LONG QUESTIONS:

1. Describe methods of asexual reproduction in fungi.
2. Draw life cycle of Rhizopus.
3. Give land adaptations in fungi on land.
4. Give economic gains of fungi
5. Discuss economic losses due to fungi.
6. Explain sexual reproduction in Fungi.
7. Describe giving examples, different ways in which fungi are useful to human.

CHAPTER NO.9 KINGDOM PLANATE

SHORT QUESTIONS:

1. Why bryophytes are called amphibians of plants.
2. Define double fertilization.
3. Differentiate between micro gametophyte and mega gametophyte.
4. How spores of mosses differ from spores of worst?
5. Define Paraphyses.
6. What is homosporous?
7. What is essential and non-essential parts of flower?
8. Compare monocots and dicots in at least two morphological characters.
9. Difference between antheridia and archegonia.
10. What are integuments?
11. Which plant group is called arthropytes and Why?

LONG QUESTIONS:

1. Describe the adaptations of bryophytes to land habitat.
2. Explain shortly evolution of leaf.
3. Name various steps involved in evolution of seed habit.
4. Describe gametophyte stage in the life history of adiantum.
5. Describe evolution of leaf.
6. Describe the important steps involved in the evolution of seed Habits.
7. Describe the difference between monocotyledon and dicotyledonous plants.
8. Write a note on adaptation of Bryophytes for life on land.
9. Write the economic importance of Family Poaceae.

CHAPTER NO. 10

SHORT QUESTIONS:

1. Differentiate between spiral and radial cleavage.
2. Differentiate between protostome and deuterostome with two points.
3. Differentiate between radial symmetry and bilateral symmetry.
4. Differentiate between diploblastic and triploblastic
5. Differentiate between coelomates and acoelomates.
6. Define protandrous animals.
7. What is commercial importance of sponges?
8. What is polymorphisms in coelenterate? Also give an example.
9. Give any two parasitic adaptations of flat

worms. 10.How insects are beneficial to man.

11.What is radula?

12.Define regeneration.

13. Write down importance of shark.
14. What is swim bladder? Give its function.
15. Differentiate between radial and bilateral symmetry.
16. Differentiate between diploblastic and triploblastic animals.
17. Differentiate between proterostomia and deuterostomia.
18. Define gemmules and protandrous.
19. What is polymorphism?
20. Differentiate between polyps and medusa.
21. Write any two parasitic adaptations of flat worms.
22. Describe disinfestation of Taenia.
23. Name some useful insects of arthropods.
24. Differentiate between enterocoelous and schizocoelous feature.
25. What is blastostyle?
26. What do you know about flame cells?
27. What do you know about class hirudinea?
28. What is metaporphosis?
29. Write down some general characteristics of class chondrichthyes.
30. Write similarities of birds and reptiles.

LONG QUESTIONS:

NO LONG QUESTIONS IN THIS CHAPTER

CHAPTER NO. 11.

BIOENERGETICS. SHORT QUESTIONS:

1. Define bioenergetics. Does it obey laws of thermodynamics?
2. Differentiate between respiration and photosynthesis.
3. What is compensation point? When it occurs.
4. Differentiate between chlorophyll 'a' and chlorophyll 'b' by writing their molecular formulae.
5. Differentiate between photosynthetic pigments and accessory pigments.
6. What are products of light reaction of photosynthesis?
7. Define photolysis of water.
8. Define chemiosmosis.
9. What is rubisco? State its function.
10. Name the process which act as energy capturing and energy releasing process.
11. What are accessory pigments? State their role.
12. What is Calvin Benson cycle?
13. What is action spectrum?

LONG QUESTIONS:

1. Describe water as important reactant of photosynthesis.
2. Sketch and describe Calvin cycle.
3. Write a detailed note on citric acid or Krebs cycle.
4. Sketch and describe glycolysis.

CHAPTER NO. 12 NUTRITION

SHORT QUESTIONS:

1. Define symbiotic nutrition with example
2. Differentiate between absorption and assimilation.
3. Enlist steps involved in holozoic nutrition.
4. Write a note on peristalsis. OR Define what peristalsis is.
5. Define Antiperistalsis.
6. What is Saliva? Give its composition.
7. Define peristalsis and antiperistalsis.
8. Define heart burn or pyrosis also give its causes. What is pyrosis.
9. Define Botulism. Give its causes.
10. Write two side effects of obesity.
11. What is the cause of food poisoning?
12. Define nutrition.
13. What is meant by symbiotic nutrition?
14. Differentiate between chyme and bolus.
15. What is gastrin? Give its function.
16. What is the cause of constipation?
17. How appendicitis develop?
18. What is obesity? Write reasons.
19. Define assimilation.
20. Tubular digestive system is more efficient than sac like. Give reason.

LONG QUESTIONS:

1. How insectivorous plants meet their demands of organic compounds? Describe it.
2. Explain digestion in human stomach.
3. How food is digested and absorbed in small intestine.
4. Describe the role of pancreas and liver in food digestion in Human.
5. Write a note on food poisoning.

CHAPTER NO. 13 **GASEOUS**

EXCHANGE. SHORT QUESTIONS:

1. Why air is better respiratory medium than water.
2. Write down properties of respiratory surface in animals.
3. Differentiate between diaphragm and pleura.
4. Differentiate between bronchi and bronchioles.
5. Why O_2 can be obtained more easily from air than from water.
6. Describe the role of Mitochondria in photorespiration.
7. Define Photorespiration.
8. Why ventilation in water is far more difficult than air?
9. Difference between spiracles and tracheotes
10. What are parabronchi? Give their function.
11. How enzyme substrate complex is formed.
12. What is respiratory distress syndrome?
13. Define Tuberculosis. Give its symptoms.
14. What happens when diving reflex is activated?
15. Difference between bronchi and bronchioles.
16. What are alveoli?
17. What is the effect of carbon dioxide on the transport of oxygen in blood?
18. What are causes and symptom of pulmonary tuberculosis?
19. What are the symptoms of Asthma? Write down its causes.
20. Define emphysema.
21. What is diving reflex?
22. Give % age of O_2 and CO_2 in inhaled and exhaled air.
23. How inhalation and exhalation do occurs in cockroach.
24. How does temperature affect the oxygen carrying capacity of hemoglobin?
25. What is respiratory distress syndrome? Give a brief description of respiratory distress.

LONG QUESTIONS:

NO LONG QUESTIONS IN THIS CHAPTER

CHAPTER NO. 14 **TRANSPORT**

SHORT QUESTIONS:

1. Differentiate between apoplast and symplast pathway.
2. Write a note on bleeding.
3. What is imbibition? Write its significance for the germination of seeds.
4. Compare open and closed circulatory system.

5. What are blood platelets? Give their function.

6. What do you know about thalassemia?
7. What is blue baby? OR What do you know about blue babies?
8. How we can avoid heart attack.
9. Define passive immunity. OR What is passive immunity.
10. Differentiate between active and passive immunity.
11. Compare cell mediated response with humoral immune response.
12. Define immunity. Name its two types.
13. Define inhibition.
14. What is brain hemorrhage? Give its two preventive measures.
15. What are Lenticels? Give their function.
16. Give blood route in fish circulatory system.
17. What is systemic circulation?
18. Difference between Thrombus and embolus.

LONG QUESTIONS:

1. Describe lymphatic system.
2. What cohesion tension theory.
3. Explain pressure flow theory.
4. Give an account of composition of blood plasma.
5. Write a note on major types of immunity.
6. Write down any four difference between arteries and veins.
7. Describe influx of K^+ ions hypothesis to explain the opening and closing of stomata.