

## **9<sup>th</sup> CLASS GUESS PAPER BIOLOGY – 2022.**

### **CHAPTER NO. 1. INTRODUCTION TO BIOLOGY.**

#### **SHORT QUESTIONS.**

1. Define Biology and branches of biology.
2. What is parasites? Define parasitology.
3. Write the contribution of Bu Ali Sina.
4. Write two inventions of Jabir Bin Hayan.
5. Write down the names of groups for biomolecules and give example.
6. Write difference between population and community.
7. What is Biosphere level?
8. Difference between cell level and tissue level.
9. What is meant by Biotechnology?
10. Biotechnology help is mankind. Justify
11. What is immunology?
12. Difference between physiology and taxonomy.
13. What is meant by Bio-elements?
14. What is species? Write an example.
15. Difference between vegetative organs and reproductive organs.
16. Difference between Micromolecules and Macromolecules with example.

#### **LONG QUESTIONS.**

1. Which professions can be adopted after biological studies? Explain any four
2. Explain detail of any five carriers in Biology.
3. Describe population and community level of organization of organisms.
4. Explain unicellular organization. Multicellular organization and colonial organization.
5. What is organs? Explain organ system level.

### **CHAPTER NO. 2 SOLVING A BIOLOGICAL PROBLEM.**

#### **SHORT QUESTIONS.**

1. Define Scientific method.
2. Write down names of steps of biological method.
3. Difference between qualitative and quantitative observation.
4. Write two characteristics of good hypothesis.
5. Write two observation of A.F.A. King.
6. Why do e do itching after biting of mosquito?
7. How Aedes mosquito spreads Dengue fever.
8. Difference between Ratio and Proportion.
9. Explain Deduction.
10. Explain Biological laws.
11. Define theory and law.
12. How data organization.
13. Explain the symbol of dengue fever.

#### **LONG QUESTION.**

NO LONG QUESTIONS IN THIS CHAPTER.

## **CHAPTER NO. 3 BIODIVERSITY.**

### **SHORT QUESTIONS.**

1. Write importance of Biodiversity.
2. What is bases of classification? Explain.
3. Define Species.
4. Define Binomial nomenclature and method.
5. Difference between Taxonomy and systematics?
6. Difference between Flora and Fauna.
7. Write down simple classification of "Human"
8. Write three Characteristics of Kingdom Monera.
9. How fungi differ from other plants?
10. What is meant by Endangered Species? Any two endangered species in Pakistan.
11. Difference between extinct and endangered species.
12. What is meant by Deforestation?
13. Give two reasons for the exclusion of Kingdom Fungi from Kingdom Plantae.

### **LONG QUESTIONS.**

1. Describe the significance of binomial nomenclature with examples.
2. Explain three main types of organisms placed in Kingdom Protista.

## **CHAPTER NO. 4 CELLS AND TISSUES.**

### **SHORT QUESTION.**

1. What is Micrograph?
2. Difference between the magnification and resolution of a microscope?
3. Write down the principles of cell theory.
4. What is difference between primary wall and secondary wall?
5. Describe the contribution of Mathlas Schielden and Theodar Schwann in formation of cell theory.
6. Describe two functions of cell membrane.
7. Draw the diagram of mitochondria and write the name of its two parts.
8. Write two functions of lysosomes.
9. Write the act of reverse osmosis.
10. Deference between Diffusion and Osmosis?
11. What is meant by Hypertonic and Hypotonic solutions?
12. What is endocytosis? Give types.
13. Difference between Endocytosis and Exocytosis.
14. What are sclerenchyma tissues?
15. Give two function performed by Cytoplasm.

### **LONG QUESTIONS.**

1. Draw a diagram of internal structure of an animal cell and label it's any six parts.
2. What are plastids? Describe their types.
3. Difference between prokaryotic and eukaryotic cells.
4. Define compound tissues and explain compound tissues found in vascular plants.
5. Explain structure, location and function of any four types of epithelial tissue.

## **CHAPTER NO. 5                      CELL CYCLE.**

### **SHORT QUESTIONS.**

1. Difference between chromatin and chromosome.
2. Define G<sub>0</sub> Phase?
3. Define mitosis. In which cells it occurs?
4. Difference between karyokinesis and cytokinesis.
5. How cytokinesis occur in plant cells?
6. Define alternation of generations.
7. Define Metastasis.
8. Define Meiosis. Which biologist discover meiosis?
9. Difference between Meiosis and Mitosis.
10. Define crossing over.
11. Difference between apoptosis and necrosis.
12. Explain S-Phase cell cycle.
13. Define alternation of generation.
14. Difference between somatic cells and germ cells.
15. What basic difference in cell division of plants and animals?

### **LONG QUESTIONS.**

1. Discuss four phases of interphase during cell cycle.
2. What is the significance of Mitosis?
3. Difference between Apoptosis and Necrosis.

## **CHAPTER NO. 6                      ENZYMES.**

### **SHORT QUESTIONS.**

1. Define activation energy. How enzymes effect on it?
2. Write names of four enzymes.
3. Define metabolism. Name its two types.
4. What is metabolic pathways?
5. Difference between prosthetic group and co -enzyme.
6. Describe the use of enzymes in food industry.
7. What is meant by active site in enzyme?
8. Define optimum temperature.
9. How pH effects on-enzymes action? Give an example.
10. Define induced fit model of enzymes.
11. Induced-fit model of enzyme action is more acceptable than lock and key model of enzyme action. Justify.
12. Enzymes lower the activation energy of chemical reaction. Explain two methods.
13. Birds have high body temperature than mammals. What would happen to the activity of a bird's enzyme if it in giving temperature is 37 °C
14. Pepsin is a powerful protein digesting enzyme. It does not digest the stomach walls, which are mostly proteins. Justify.

### **LONG QUESTIONS.**

1. What are Enzymes? Describe five characteristics of enzyme.

2. Explain the mechanism of enzyme action.
3. Enzyme affect of temperature and substrate concentration on the rate of enzyme action.

## **CHAPTER NO. 7 BIOENERGETICS.**

### **SHORT QUESTIONS.**

1. What and what is discovered by “Karl Lohmann”?
2. Write down the three subunits of ATP.
3. What is meant by Bioenergetics?
4. What is Photosynthesis? Write its equation.
5. What is photolysis of Water?
6. Define Respiration and cellular respiration.
7. Name the compounds produced during respiration.
8. Difference between aerobic and anaerobic respiration.
9. Define alcoholic fermentation with equation.
10. What is meant by Anaerobes?
11. Define glycolysis.
12. Difference between Photosynthesis and respiration.
13. Compare aerobic and anaerobic respiration with respect to site of occurrence and final products.

### **LONG QUESTIONS.**

1. What do you mean by photosynthesis? Describe difference between photosynthesis and respiration.
2. Explain the summary of light reaction and draw a diagram of Z-Scheme.
3. Write a note on energy budget of respiration.
4. How energy is released during oxidation reduction reactions in living organisms.

## **CHAPTER NO. 8 NUTRITION.**

### **SHORT QUESTIONS.**

1. Define Nutrition.
2. Difference between organic and inorganic fertilizer?
3. Explain the effect of deficiency of Nitrogen and magnesium on the plants.
4. What is meant by saturated and unsaturated fatty acids?
5. If we supply inorganic and organic fertilizers to plants, which one would be first available to the plants for uptake and why?
6. Difference between Fat Soluble and water soluble vitamin.
7. Write down the symptoms of scurvy
8. What is night blindness?
9. What is meant by WFP?
10. Define Mastication.
11. How does iodine function in our body?
12. What is meant by Malnutrition?
13. Difference between assimilation and absorption?
14. Difference between bolus and chime?
15. Describe the function of pepsin in stomach?
16. Write the causes of ulcer.
17. Balanced diet differs with age and gender. Explain.

### **LONG QUESTIONS.**

1. Write down the importance of Fertilizers.
2. Describe minerals deficiency diseases.
3. Write four function of Liver.

## **CHAPTER NO. 9                      TRANSPORT.**

### **SHORT QUESTIONS.**

1. Write the function of root in plant.
2. What is meant by wind? Write its effect on transpiration.
3. Difference between source and sink?
4. What do you mean by blood? Write composition of a healthy man.
5. How is plasma separated from blood?
6. How many types of cells are found in blood? Write two names of these.
7. What do you mean by pus? How is formed.
8. Why dengue fever is too dangerous for human?
9. Write the symptoms of Dengue Fever.
10. What is systemic circulation?
11. Define Serum.
12. Write the names of different chambers of human heart.
13. What is the role of pericardial fluid?
14. Define universal donors and universal recipients.

### **LONG QUESTIONS.**

1. How uptake of water and ions take place in plants?
2. Write a note on ABO blood group system.
3. What do you mean by blood groups? How do we classify blood groups in terms of ABO and Rh blood group systems?
4. Difference between structure and function of arteries and veins.