Class: 11th

Biology

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All Punjab Boards

Most Important Guess Paper

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"یہ گیس پیپر اتنا اہم ہے کہ آپ کی محنت اور یہ سوالات آپ کو کامیابی کی بلندیوں تک پہنچائیں گے، انشاءاللہ! ان کو اچھی طرح تیار کر لیں۔"

Most Important Questions

Chapter No # 1

Define Following branches: Ecology, histology, social biology, parasitology, Fresh water biology, Marine biology, biotechnology Molecular biology, biogeography, Anatomy, embryology, morphology

NOTE: Prepare these definitions for short Questions and can also be used in long Question. (Branches of Biology)

- What is hydroponic culture technique and pasteurization?
- Define Biological method and vaccination.
- Write Characteristics of living organisms.
- Define Tissue culture technique and cloning.
- Define gene therapy, radiotherapy and chemotherapy.
- Define hypothesis and Ways to formulate hypothesis.
- **Difference between Deductive and inductive reasoning with example. (S.Q + L.Q)**
- Define Theory, law and phyletic lineage.
- Difference between micro and macro molecule.
- Difference between population and community.
- Define integrated disease management?
- Biological organization is not simple. Comment on it.
- How did industalization destroy our environment?
- Define bioremediation and endangered species. Give an example.
- What is the significance of the study of fossils?
- Why it is difficult to define life?

Chapter No # 2

- What are lipids and waxes? Write its importance.
- Difference between catabolism and anabolism.
- Formula of amino acid and define it.
- Difference between amylose and amylopectin.
- Ionization and protective role of water.
- What is peptide bond and glycoside bond?
- Define conjugate molecules and terpenoids. Give example.
- Define nucleoside and nucleotide.
- Sketch the structure of ATP and glycinealynine?
- Why proper arrangement of amino acids is necessary for proteins? Give example.
- Why lipids are considered high energy molecules as compared to carbohydrates.

- Define Purines and pyrimidines.
- **How fibrous protein differ from globular protein? / Describe various types protein. (S.Q + L.Q) (V.V.V IMP)**
- Define Heat capacity and heat of vaporization of water.
- **Draw the schematic diagram about the components of ATP and explain it. (S.Q + L.Q)**
- **Write four functions of proteins. (S.Q + L.Q)**

Chapter No # 3

- Explain the mechanism of enzyme action.
- At Ph 2 pepsin works while arginase does not work. Why?
- Define apoenzyme and holoenzyme.
- Define competitive and non-competitive inhibitors.
- Define prosthetic group, activator and co enzyme.
- What is co factor? Write its function.
- Write four characteristics of enzymes.
- Difference between Binding site and catalytic site.
- What is active site and optimum pH?
- Difference between Lock and key model and induced fit model.
- How temperature and pH affect the rate of enzyme action?
- What happens to enzyme structure when a substrate combines with it according to induced fit model?
- What are inhibitors? Write difference between reversible and irreversible inhibitor.
- Why human beings die by eating of poisons or drugs?

Chapter No # 4

- Write Salient features of cell theory.
- Endocytosis and exocytosis and what are phagocytosis and pinocytosis?
- Write Functions of SER and RER.
- What are chromosomes? Why are they important?
- Ribosome and write its function.
- Define Polysome and autophagosome
- Give two functions of mitochondria, cytoplasm and vacuole.
- Similarities and differences in the structure and function of mitochondria and chloroplast.
- Significance of vacuole in plant cell.
- Golgi apparatus and lysosomes functions (any 2).
- Difference between microtubules and microfilaments.
- Cisternae and cristae.
- How F1 particles play role in energy production and why mitochondria are called power house of the cell?
- Chromoplast and leucoplast.
- Difference between prokaryotic and eukaryotic cell.
- Why fluid mosaic model of cell membrane is widely accepted?
- What is storage and Tay-Sach's disease?
- What is cell fractionation and grana?

Chapter No # 5

- Define species with example.

- Draw label diagram of HIV.
- Why is HIV said to be host specific and What are the symptoms of AIDS?
- Rules of binomial nomenclature and also define it.
- Obligate and intracellular parasite.
- Characteristics and structure of virus.
- Polio and herpes simplex.
- Hepatitis symptoms and its prevention.
- Define provirus and prophage.
- Lytic and lysogenic phage.
- What you know about pox virus, Mumps and measles.
- Reverse transcriptase and it function.
- Define induction and phylogenetic system of classification.
- Define capsid, capsomere, prion and viroids.
- **Give biological classification of Maize. (S.Q + L.Q) (V.V.V.IMP)**

Chapter No # 6

- Differentiate between slime and capsule.
- Postulates of germ theory of diseases.
- Name the bacteria which are photosynthetic.
- **Classify bacteria with respect to flagella (S.Q + L.Q)**
- Gram positive and Gram-negative bacteria.
- **What are lophotrichous and amphitrichous bacteria / Shapes of Bacteria (S.Q + L.Q)**
- What are pili? Write their functions.
- Antiseptics and disinfectants.
- **Classification of bacteria on the basis of shapes. (S.Q + L.Q)**
- Photosynthetic and chemosynthetic bacteria / types of bacteria.
- Mesosomes and its function.
- Define spore, cyst and conjugation.
- Define microbicidal and microbistatic effect?
- What are microaerophilic bacteria? Give an example.

Chapter No # 7

- Distinguish characters of kingdom Protista.
- Two characters of Giant amoeba and ciliates.
- How will you compare fugus like protists with fungi?
- Functions of Micronuclei and macronucleus in ciliates.
- Evolutionary significance of choanoflagellates and EUGLENOIDS
- How ciliates differ from protozoans.
- Note on green algae and brown algae.
- What are diatoms? Give their importance.
- Trypanosoma and Kelps with its parts
- Write two characteristics of apicomplexans.
- How algae different from plant?
- Why euglenoids are placed in algae as well as in protozoa?
- Chlorella and red tides with its role.
- Importance of algae and red algae.
- What is pellicle and thallus?
- Slime mold/ myxomycete / Water molds and oomycetes with its importance.

- Why green algae are called ancestors of plants?
- Role of phytophthora infestans in human body.
- Difference between foraminifera and actinopods.
- Write two characteristics of dinoflagellates and choanoflagellates.

Chapter No # 8

- Name diseases caused by fungi in plants and animals and name any four antibiotics obtained from fungi.
- Define thallus and prothallus.
- Types of parasites.
- Plasmogamy and karyogamy difference.
- Ruts and smut difference.
- How budding differ from fragmentation?
- Define yeast and Importance of yeast.
- Histoplasmosis and Ergotism? How it is caused?
- What is aflatoxin and lichens?
- Define hyphae and mycelium.
- Write two differences between conidia and spores.
- Define septate and non-septate hyphae.
- Define par asexuality, candidiasis and nuclear mitosis.
- What are mycorrhizae and define echo and endo mycorrhizae.
- Why basidiomycetes are called club fungi?
- Bioindicators and reindeer moss?

Chapter No # 9

- Define bryophytes and Why bryophytes are called amphibious plants? / What are bryophytes? Give its characteristics.
- Why anthoceropsids are more advance than other bryophytes?
- What is arytherophytes? Give example.
- Reticulate leaf venation / circinate venation.
- Microphylls and megaphylls leaves.
- Phylogenetic system of classification.
- Define paraphyses, ovule and fronds.
- **Difference between monocot and dicot? (S.Q + L.Q)**
- Define Overtopping, planation and webbing.
- What is flower? What is essential and non-essential parts of flower?
- Differentiate between micro gametophyte and mega gametophyte.
- Difference BETWEEN gymnosperm and angiosperm.
- Differentiate between homospory and heterospory and give examples.
- Name the classes of divisions Bryophyta and Tracheophyte.
- Alternation of generation and double fertilization.

Chapter No # 10

- Spiral and radial cleavage.
- Radial and bilateral symmetry.
- Importance of sponges and coral reefs.
- Spicules, gemmules and cnidocytes.
- Coelom and hermaphrodite animals.
- Differentiate between polyp and medusa.

- Compare infestation with disinfestations.
- Diploblastic and triploblastic animals.
- Write two parasitic adaptations in flat worms.
- Metamorphosis and nymph.
- Harmful and beneficial effects of insects.
- Mantle and radula.
- Protandrous animals and syrinx.
- Ostia and osculum.
- Give affinities of Echinodermata with hemichordates.
- Economic importance of shark.
- What is ecdysis and polymorphism in coelenterate?
- What is regeneration? Give example.
- What is swim bladder? Give its function.

Chapter No # 11

- Difference between photosynthesis and respiration.
- Difference between chlorophyll a and b and Photo system 1 and 2.
- Define Bioenergetics and compensation point.
- Define pigments, photosynthetic and accessory pigments.
- Define Chemiosmosis, oxidative phosphorylation and photolysis of water.
- Use of spectrophotometer.
- What is Z scheme and Glycolysis?
- Why Calvin cycle is called C3 cycle?
- Rubisco and it function.
- Photophosphorylation and oxidative phosphorylation.
- What is the site of occurrence of glycolysis, Krebcyce and ETC?
- Differentiate between absorption spectrum and action spectrum.
- Distinguish Alcoholic fermentation from lactic acid fermentation.
- Define external and cellular respiration.
- What are cytochromes and photosystems? Give two examples with its roles.
- What are the products of light reaction of photosynthesis?

Chapter No # 12

- Digestion, ingestion, Adsorption and assimilation.
- Fluid feeder and filter feeder.
- Saliva and its composition.
- Symbiotic nutrition with example.
- Nutrition and nutrient.
- Peristalsis and antiperistalsis.
- Hungarpangs and heart burn or pyrosis.
- Define gastrovascular cavity in coelontrates.
- Name the pair of salivary glands with their location and Three kind of cells present is gastric juice.
- Bolus and chyme.
- Functions of large intestines and Side effects of obesity.
- What is appendicitis and jaundice?
- What are villi and its function.
- Diarrhea and constipation compare.
- Symptoms of dyspepsia and food poisoning.

- What is botulism? Give it cause.
- What is emulsification and chlorosis?
- Obesity with its two side effects.
- What are nematocysts?
- Why digestive system of cockroach is more efficient than hydra?

Chapter No # 13

- Breathing and respiration.
- What is photorespiration? Name organelles involved in it.
- Advantage of gas exchange in air environment.
- Properties of respiratory surface / Features exhibited by the respiratory surfaces in animals.
- What is respiratory distress syndrome?
- Asthma and Symptoms of asthma.
- Larynx or voice box and alveoli with its function.
- Bronchi and bronchioles.
- What happens when glycine enters mitochondria.
- How body of earthworm kept moist?
- Pulmonary and cutaneous respiration.
- What is diving reflex and parabronchi?
- How temp affects the oxygen carrying capacity of hemoglobin?
- How organism respiration different from cellular respiration?
- Why air is better respiratory medium than water?
- Glottis and epiglottis.
- What is diaphragm and pleura?
- Inspiration and expiration.
- Effect of ph on capacity of hemoglobin?
- How inhalation and exhalation occur in cockroach?

Chapter No # 14

- Discriminate apoplast pathway from symplast pathway.
- How facilitated diffusion differ from that of active transport?
- What is imbibition's and root pressure.
- Cell mediated and hormonal response.
- ECG and pacemaker.
- Blood platelets and red blood cells and its function.
- Bleeding, imbibition's and guttation.
- Define stroke, myocardial infraction, hypertension and hemorrhage.
- Define thrombus and embolus.
- How we can avoid heart attack?
- What is the role of Casparian strips in roots of plants and define isobilateral leaves?
- Transpiration with its types.
- **Write four functions of lymphatic system. (S.Q + L.Q)**
- What are natural and artificial pacemakers? What is their role?
- Define open and closed circulatory system?
- **Differentiate between active and passive immunity. (S.Q + L.Q)**
- What do you know about cardiac cycle and blue babies?
- **Write four differences between arteries and veins. (S.Q + L.Q)**

Most Important Long Questions

Chapter No # 1

- Write a detailed note on the steps of biological methods.
- How biology has help mankind in food production? **(V. V. V IMP)**
- Write a note on cloning. **(V. V. V IMP)**
- Write comprehensive note on biology in the service of mankind / Health and disease control Write a note on protection and conservation of environment. **(V. V. V IMP)**

Chapter No # 2

- Write a detailed note on importance of water. **(V. V. V IMP)**
- Detail Note on structure of proteins (Primary, secondary, tertiary, quaternary). **(V IMP)**
- Write a note on Acylglycerol and phospholipids.
- Discus different types of RNA. **(V. V. V IMP)**
- Structure of DNA.
- Define polysaccharides? Describe its various types.

Chapter No # 4

- Give an account on plastids in plant cells.
- Describe structure and functions of Golgi apparatus and mitochondria. **(V. V. V IMP)**
- Difference between prokaryotic and eukaryotic cell. **(V. V. V IMP)**
- Write a note on Lysosomes and cell wall. / What might happen if lysosomal enzymes are absent? Explain it with examples.
- What is peroxisome and glyoxoxisome? Give its functions.
- What are cytoskeletons? Describe various types and their functions. **(V. V. V IMP)**

Chapter No # 5

- Write a note on lifecycle of HIV.
- Write a detail note on hepatitis and its types. **(V. V. V IMP)**
- Explain life cycle of bacteriophage with diagram. **(V. V. V IMP)**
- Discuss five kingdom system of classification.
- What is virus? Give their structure. Characteristics and its functions. **(V. V. V IMP)**
- Discus some viral diseases in Pakistan.

Chapter No # 6

- Write a detailed note on nutrition in bacteria. **(V. V. V IMP)**
- Explain Growth & Reproduction in bacteria.
- Use and misuse of antibiotics. **(V. V. V IMP)**
- Write a Note on cyanobacteria and Nostoc.
- Describe in detail the structure of bacterial cell wall emphasizing Gram positive and Gram-negative bacteria. **(V. V. V IMP)**
- Describe physical and chemical methods to control bacteria. **(V. V. V IMP)**

Chapter No # 8

- Write about sexual and asexual reproduction in fungi. **(V. V. V IMP)**
- Discuss briefly about nutrition in fungi. **(V. V. V IMP)**
- Write a note on Ascomycota and Basidiomycota.
- Write economic gains and economic losses due to fungi. **(V. V. V. V IMP)**

- Draw life cycle of Rhizopus.
- Write a note on land adaptations of fungi.

Chapter No # 9

- Explain alternation of generation and give its significance. **(V. V. V. V. V IMP)**
- Briefly explain evolution of leaf.
- Describe the adaptations of bryophytes to land habitat. **(V. V. V. V IMP)**
- Describe the life cycle of adiantum. **(V. V. V IMP)**
- Describe the life cycle of angiosperms. **(V. IMP)**
- Briefly explain the steps involved in the evolution of seed habit. **(V. V IMP)**

Chapter No # 11

- Explain Calvin cycle with the help of diagram as it occurs in photosynthesis. **(V. V IMP)**
- Describe water as important reactants of photosynthesis.
- Explain Glycolysis in detail. **(V. V. V IMP)**
- Draw Krebs's Cycle. **(V. V. V IMP)**
- Photosynthesis is energy producing process. Justify this statement.
- Various steps involved in cyclic and non-cyclic phosphorylation process with diagram. **(V. V. V IMP)**

Chapter No # 12

- Describe the role of oral cavity in digestion. **(V. V. V IMP)**
- Digestion in hydra, amoeba and cockroach. **(V. V. V. V. V IMP)**
- Give the role of large intestine and stomach in human beings. **(V. V. V IMP)**
- Write a note on any two-disease related to nutrition.
- Discuss digestion and absorption in small intestine.

Chapter No # 14

- Write a detailed note on Immunity. **(V. V. V IMP)**
- What is plasma? Describe it various components. **(V. V. V IMP)**
- Types of transpiration and explain the factors affecting the rate of transpiration **(VV IMP)**
- Explain the opening and closing of stomata through different hypothesis
- Describe various functions of blood and lymphatic system. **(V. V. V IMP)**
- Transpiration is a necessary evil. Comment on this statement.
- Draw heart and write its structure and functions. **(V. V. V IMP)**
- Write a note on cardiac cycle. Explain Pressure flow mechanism

11th Biology Long Questions Pairing

"Likely Pairing Scheme For All Punjab Boards"

Questions NO # 5	**Chapter No # 1 (a) + Chapter No# 14(b)**
Questions NO # 6	**Chapter No # 2 (a) + Chapter No # 8(b)**
Questions NO # 7	**Chapter No # 6 (a) + Chapter No # 9(b)**
Questions NO # 8	**Chapter No # 5 (a) + Chapter No # 11(b)**
Questions NO # 9	**Chapter No # 4 (a) + Chapter No # 12(b)**

- **"Bold questions are very important, so make sure to focus on them!"**

نوٹ: "MCQs کے لیے، آپ Pakcity.org کی ویب سائٹ سے گیس پیپر کی مکمل فری PDF فائل ڈاؤن لوڈ کر سکتے ہیں، جس میں پچھلے تمام سالوں کے تمام بورڈ کے پیپر چیپٹر وائز حل کیے گئے ہیں۔"