

Biology (New Book) - 9th Class Biology Urdu Medium Short Question Preparations

Q1. What are teh main functions of cell membrane.
Ans 1: i. It is selectively -permeable ii. It allows very few molecules to pass through it while blocks many outher molecules.
Q2. What is computational biology?
Ans 1: Definition: In Computational Biology, scientists use mathematical models, algorithms, and computer simulations to understand biological system and relationships.
Ans 2: Role of Computational Biology: It involves analysisng biological data, such as sequence fo amino acids in a proteins.
Q3. What are sister chromatides, and when do they separate in meiosis.
Ans 1: Sister chromatide are identical copies of a single chromosomess. These sister chromatides are separated during anaphase -II of mciosis.
Q4. Transport is the loss ow water from plants, Is it a harmful phenomenonn? If no. what is its importance.
Ans 1: Transpiration is a necessary eveil It is harmful during he condition of drouhght. As wate loss cause wilting of the plant. But at the same time it is important for plant as it cause cooling effect, genertes transpirational pull and helps in gaseous exchange.
Q5. Give and example of storage polysaccharide in plants.
Ans 1: Starch is a storage polysaccharide found in plants. It is composed of glucose untis.
Q6. How do the plants of rubber and keekar excrete their wastes.
20. Total 20 and plante of readon and resonal states along traction.
Ans 1: Plants deposit many metabloic wastes in their bodies as harmless insoluble materials. i. Latex are removed by rubber plants. ii. Gums are removed by keekar.

Ans 1: Dna contains the hereditary information. This information is in the form of a sequence determines the order of amino acids drig protein synthesis. The segment of DNA in which the sequence . The segment of DNA in which the sequence fo nucleotides determines the synthesis of a proteins is called a gene. During reproduction, DNA is passed from one generation to the next, in this

Q7. Briefly describe the function of DNA.

Q8. Difference between Plant and Animals

Ans 1: Plant:

- i. Eukaryotic muti cellular
- ii. Autotrophci whith chloroplast containging Chlorophyll
- iii. thy have cellulose in cell walls.
- iv. They cannot move
- v. Examples: Mose, Mustard

Ans 2: Animals:

- i. Eukaryotic multi cellular
- ii. Heterotrophic and lack chlorophyll
- iii. animals lack cell wall
- iv. They cna move from place to place.
- v. Example : a . Invertebrates e.g. insects, star fish
- b. Vertebrates e.g. fish, frogs.

Q9. Define Light Reactions.

Ans 1: Define: During light reaction, light energy is used to make high-energy molecules ATP and NADPH.

Q10. Define Photosynthesis.

Ans 1: Photosynthesis is the synthesis is glucose from carbon dioxide and water in the presence of sunlight with oxygen as a by product.

Q11. Difference betwen Bacteria and Protists

Ans 1: Bacteria:

- i. Prokaryotic organismsm
- ii. They are unicellular, filamentous or colonial and are relatively simple in structure

Example: Bacterial and Cyanobacteria

Ans 2: Protists:

- i. Eukaryotic organisms
- ii. Univellular or simple multicellular and mostly equatic

Example: Amoeba, Euglena, and slime molds.

Q12. How do lysosomes contribute to the cell's functioning.

Ans 1: i. Lysosomes bud off form Golgi apparatus.

- ii. Cell engulfs the food material in the form of food vacuole
- iii. Lysosomes fuses with food vacuole and its digestive enzymes break down the food presente in vacuole
- iv. Lysosomes also have enzymes for breaking cellular water
- v. They also engulf the damaged organelles and break them
- vi. Lysosomes can store certain molecules for later use.

Q13. Difference between competitive and non competitive inhibition.

Ans 1: Competitive Inhibition:Some inhibitiors resemble the enxyme's substrate They compete with the substrate to attach to the active site of enxyme. Whe the inhibitor is attached to the active site. It blocks it and oes not allow the substrate to attach. Example: Examples of competitive inhibitors are antibioties. The antibiotic molecules compete with the substrates of bacterial enzymes. They attach to bacterial enzymes and inhibit them.

Ans 2: Non-Competivive inhibition: Some enxyme inhibitio do not have similarity to the substrate. They do not attach to the active site of enxyme. Rather they attach to some other location of enzyme. This attachement change sthe overall shape of enzyme and active site. so, this changed active site does not fit substrate and enxyme is inhibited Example: Heavy mtals like ercury and certain drugs used in cancer therapy.

Q14. Name the factors affecting enzyme activity.

Ans 1: 1) Temprature

2) Substrate Conscentration.

3) pH

Q15. Define Dark Reaction (Calvin Cycle)

Ans 1: Define: During this phase, carbon dioxide is reduced to make glucose. The details of dark reactions were discovered by Melvin Calvin.

Q16. What happens to an enzyme when it is frozen below 0 oC?

Ans 1: At very low temperature enzyme remain inactive due to fall in availabel activation energy.

Q17. Difference between Fats and Oils.

Ans 1: Fats:

Fats contain saturated fatty acids and so ar esolid at room temperatur e.g. animal fats.

Ans 2: Oils:

Oils contain unsaturated fatty acids and so ar eliquid at room temperatue e.g. plant oils such as olive oil, corn oil, and coconut oil.

Q18. Describe lock and key model of enzyme action.

Ans 1: Emil Fischer proposed the lock and key model of enzyme action. The active site has particulr rigid shape into which the specific substrate fits exacely. The substrate is imagined being like a key whose shape is complementary to the enzyme or lock. Once the product is formed no longer fits into the active site nand escapes into the surrounding medium. The active site is free to combine again with another substrate molecule.

Q19. Define Atom

Ans 1: Atoms are teh smallest unit of matter that maintain the property of an element.

Example: Carbon, Hydrogen and Oxygen etc.

Q20. Difference between glycine and Alanine

Ans 1: Glycine:

i. It is an amino acid in which R group is H

Ans 2: Alanine:

It is an amino acid in which the R group is ${\rm CH3}$