



BIOLOGY

BOOKS - VGS PUBLICATION-BRILLIANT

**FINAL TOUCH (MOST IMPORTANT
QUESTIONS)**

**Transport In Plants Very Short Answer Type
Questions**

1. Define water potential. What is the value of water potential of pure water?



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2. Explain what will happen to a plant cell if it is kept in a solution having higher water potential?



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3. With reference to transportation within plant cells, what are source and sink?



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4. How does ABA bring about the closure of stomata under waterstress conditions ?



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Transport In Plants Short Answer Type Questions

1. Write short notes on facilitated diffusion.



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2. Explain pressure flow hypothesis of translocation of sugars in plants.



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Mineral Nutrition Very Short Answer Type Questions

1. Give two examples of essential elements that act as activators for enzymes.



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2. Out of the 17 essential elements which elements are called non-mineral essential elements ?



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3. Explain the role of the pink colour pigment in the root nodule of legume plants. What is it called ?



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4. Why are amides transported through xylem ?



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1. Write in brief how plants synthesize amino acids.



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2. Explain in brief how plants absorb essential elements.



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1. How are prosthetic groups different from co-factors ?



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2. What is meant by 'feedback inhibition'?



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3. What are non-competitive enzyme inhibitors ? Mention one example.



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4. Who proposed 'Lock and Key hypothesis' and ' Induced fit hypothesis' ?



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Enzymes Short Answer Type Questions

1. Explain the importance of (ES) complex formation.



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Photosynthesis In Higher Plants Very Short Answer Type Questions

1. Name the processes which take place in the grana and stroma regions of chloroplasts.



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2. How many molecules of ATP and NADPH are needed to fix a molecule of CO_2 in C_3 plants?

Where does this process occur ?



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3. Mention the components of ATPase 'enzyme.

What is their location ? Which part of the enzyme shows conformational change?



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4. With reference to photosystem, bring out the meaning of the term antennae.



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5. With reference to photosystem, bring out the meaning of the term reaction centre.



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Respiration In Plants Very Short Answer Type Questions

1. What is the specific role of $F_0 - F_1$ particles in respiration ?



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2. Distinguish between obligate anaerobes and facultative anaerobes.



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3. Which substance is known as the connecting link between glycolysis and Krebs cycle? How many carbons does it have ?



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4. What is the final acceptor of electrons in aerobic respiration ? From which complex does it receive electrons ?



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Respiration In Plants Long Answer Type Question

1. Explain the reactions of Krebs's cycle.



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Plant Growth And Development Very Short Answer Type Questions

1. Define plasticity. Give an example.



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2. What is the disease that formed the basis for the identification of gibberellins in plants ?

Name the causative fungus of the disease.



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3. What do you understand by vernalisation ?

Write its significance.



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4. Define the terms quiescence and dormancy.



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Plant Growth And Development Short Answer Type Question

1. Write short notes on seed dormancy.



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Bacteria Very Short Answer Type Questions

1. What is sex pilus ? What is its function ?



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2. What is transformation ? Who discovered it and in which organism ?



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Bacteria Short Answer Type Question

1. Write briefly about chemoheterotrophs and their significance.



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Viruses Very Short Answer Type Questions

1. What are virulent phages ? Give an example.



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2. What is a prophage ?



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Viruses Short Answer Type Question

1. Mention the differences between lytic and lysogenic cycles.



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Principles Of Inheritance Andvariation Very Short Answer Type Questions

1. Do you think Mendel's laws of inheritance would have been different if the characters that he chose were located on the same chromosome ?



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2. How are alleles of a particular gene differ from each other ? Explain its significance.



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Principles Of Inheritance Andvariation Short Answer Type Questions

1. Write a brief note on chromosomal mutations and gene mutations



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2. Define Law of Segregation and Law of Independent Assortment.



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Molecular Basis Of Inheritance Very Short Answer Type Questions

1. Distinguish between heterochromatin and euchromatin. Which of the two is transcriptionally active ?



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2. Why was DNA chosen over RNA as genetic material in the majority of the organisms ?



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3. What is the difference between exons and Introns ?



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4. What is the difference between the template strand and a coding strand in a DNA molecule ?



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Molecular Basis Of Inheritance Short Answer Type Questions

1. Describe the sequential steps in the replication of a DNA molecule.



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2. Write briefly on nucleosomes.



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Biotechnology Principles And Processes Very Short Answer Type Questions

1. What is E CORI ? How does it function ?



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2. What are cloning vectors ? Give an example.



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3. What is palindromic sequence ?



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4. How can you differentiate between exonucleases and endonucleases ?



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Biotechnology Principles And Processes Short Answer Type Question

1. Write short notes on restriction enzymes:





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Biotechnology And Its Applications Very Short Answer Type Questions

1. Expand GMO. How is it different from a hybrid ?



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2. Name the nematode that infects the roots of tobacco plants. Name the strategy adopted

to prevent this infestation.



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3. For which variety of Indian rice, has a patent been filed by a USA company.



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4. Give one example for each of transgenic plants which are suitable for food processing and those with improved nutritional quality.



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Strategies For Enhancement In Food Production

Very Short Answer Type Questions

1. What is meant by "hidden hunger"?



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2. Name two Semi-Dwarf varieties of rice developed in India.





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3. How is somatic hybrid different from a hybrid?



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4. Which two species of sugarcane were crossed for better yield?



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Strategies For Enhancement In Food Production

Long Answer Type Questions

1. You are a Botanist working in the area of plant breeding. Describe the various steps that you will undertake to release a new variety.



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Microbes In Human Welfare Very Short Answer Type Questions

1. Name a microbe used for statin production.

How do statins lower blood cholesterol level?



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2. What is Nucleopolyhedrovirus is being used for nowadays?



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3. Write the most important characteristic that *Aspergillus niger*, *Clostridium butylicum*

and *Lactobacillus* share.



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4. Name any two species of fungus, which are used in the production of the antibiotics.



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