



# BIOLOGY

**BOOKS - VGS PUBLICATION-BRILLIANT**

## MODEL PAPER 3

### Section A

1. Differentiate osmosis from diffusion.



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2. Define the law of limiting factors proposed by Blackman.



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3. What are Pleomorphic Bacteria ? Give an example



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4. What is point mutation? Give one example.



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5. What is the difference between exons and Introns ?



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



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7. How does one visualize DNA on an agar - gel ?



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8. Name the nematode that infects the roots of tobacco plants. Name the strategy adopted to prevent this infestation.



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



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10. What are fermentors?



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## Section B

1. Transpiration is necessary evil. Explain?



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**2. What are the steps involved in formation of a root nodule?**



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**3. Explain different types of co-factors.**



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4. Write a note on agricultural / horticultural applications of auxins.



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5. Explain the structure of T-even Bacteriophages .



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6. Explain the Law of Dominance using a monohybrid cross.



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7. What are the main differences between DNA and RNA?



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8. List out the beneficial aspects of transgenic plants.



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## Section C

1. Give an account of glycolysis, Where does it occur ? What are the end products? Trace the fate of these products in both aerobic, and anaerobic respiration.



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2. Give a brief account of the tools of recombinant DNA technology.



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3. Describe the tissue culture. technique and, what are the advantages of tissue culture over conventional method of plant breeding in crop improvement programmes ?



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