



# BIOLOGY

## BOOKS - PSEB

# BIOTECHNOLOGY: PRINCIPLES AND PROCESSES

### Exercise

1. From what you have learnt, can you tell whether enzyme are bigger or DNA Is bigger in

molecular size? How did you know?



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2. What would be the molar concentration of human DNA in a human cell? Consult your teacher.



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3. Do eukaryotic cells have restriction endonucleases? Justify your answer.



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4. Besides better aeration and mixing properties, what other advantages do stirred tank bioreactors have over shake flasks?



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5. Collect 5 examples of palindromic DNA sequences by consulting your teacher. Better

try to create a palindromic sequence by following base -pair rules.



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6. Can you recall meiosis and Indicate at what stage a recombinant DNA is made?



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7. Describe briefly the following: Origin of replication



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**8. Describe briefly the following: Bioreactors**



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**9. Describe briefly the following: Downstream processing**



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10. Explain briefly: PCR



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11. Describe briefly Restriction Enzymes and DNA.



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12. Explain briefly: Chitinase



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**13.** Discuss with your teacher and find out how to distinguish between : Plasmid DNA and Chromosomal DNA



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**14.** Discuss with your teacher and find out how to distinguish between : RNA and DNA



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**15.** Discuss with your teacher and find out how to distinguish between : Exonuclease and Endonuclease



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