

# **BIOLOGY**

### **BOOKS - BAL BHARTI**

## **BIOMOLECULES**

Find Out

**1.** Why do high cholesterol level in the blood cause heart diseases?



**2.** Polyunsaturated fatty acids are believed to decrease blood cholesterol level. How?



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Exercise

**1.** Sugar, amino acids and nucleotides unite to their respective subunits to form......

A. bioelements		
B. micromolecules		
C. macromolecules		
D. all of these		
Answer:  Watch Video Solution		
2. Glycosidic bond is found in		
A. Disaccharide		

- B. Nucleosides
- C. Polysaccharide
- D. all of theses



- **3.** Amino acids in a polypetide are joined by.....bond.
  - A. Disulphide

C. hydrogen bond		
D. none of these		
Answer:		
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<b>4.</b> Lipids associated with cell membrane are		
A. Spingomyelin		

B. glycosidic

- B. Isoprenoids
- C. Phospolipids
- D. Cholesterol



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**5.** Linoleic, Linolenic and.....acids are referred as essential fatty acids since they cannot be synthesized by the body and hence must be included in daily diet.

B. Oleic C. Steric D. Palmitic **Answer: Watch Video Solution** 6. Haemoglobin is a type of.....protein, which plays indispensable part in respiration.

A. Arachidonic

- A. simple
- B. derived
- C. conjugated
- D. complex



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**7.** When inorganic ions or metallo-organic molecules bind to apoenzyme, they together form......

- A. isoenzyme
- B. holoenzyme
- C. denatured enzyme
- D. none of these



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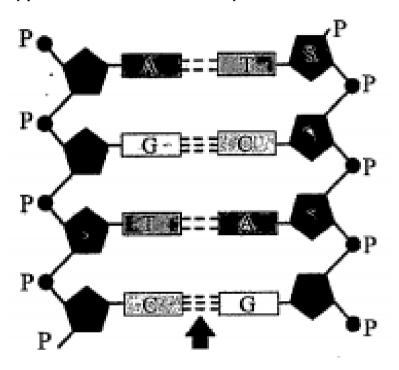
8. In enzyme kinetics, Km - Vmax/2. If Km value

is lower, it indicates.....

- A. Enzyme has less affinity for substrate
- B. Enzyme has higher affinity towards substrate
- C. There will be no product formation
- D. All active sites of enzyme are saturated



**9.** Observe the following figure and name the type of bond shown by arrow in the structure.





10. What are building blocks of life?



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**11.** Explain the peptide bond.



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12. How many types of polysaccharides you know?



13. Enlist the significance of carbohydrates.



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**14.** What is reducing sugar?



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**15.** Differentiate between the saturated and unsaturated fats.

**16.** Enlist the examples of simple protein and add their significance.



**17.** Explain the secondary structure of proteins with examples.



**18.** Explain the induced fit model for mode of enzyme action.



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19. What is RNA? Enlist types of RNA.



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20. Describe the concept of metabolic pool.



**21.** How do secondary metabolites useful for mankind?



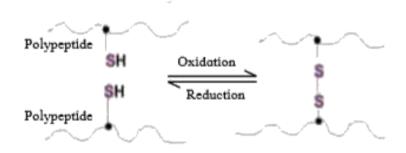
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## **22.** Complete the following chart.

Protein	Physiological role	
Collagen	***************************************	
	Responsible for muscle contraction	
Immunoglobulin IgG		
	Significant in respiration	
Fibrinogen		



**23.** Answer the question with reference to the following figure.



Name the type of bond formed between two polypeptides.



**24.** Answer the question with reference to the following figure.



Amongst I, II, III and IV structural level of protein, which level of structure includes such bond?



**25.** Match the following items given in column I and II.

Column I	Column II
i. RNA	a. Induced fit model
ii. Yam plant	b.Flax seeds
iii. Koshland	c. Hydrolase
iv. Omega-3-fatty acid	d. Uracil
v. Sucrase	e. Anti-fertility pills



**26.** What are biomolecules? Explain building blocks of life.



**27.** Explain the classes of carbohydrates with example.



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**28.** Describe the types of lipids and mention their biological significance.



**29.** Explain the chemical nature, structure and role of phospholipids in biological membrane.



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**30.** Describe classes of protein with their importance.



**31.** What are enzymes? How are they classified? Mention example of each class.



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**32.** Describe the factors affecting enzyme action.



**33.** Describe the factors affecting enzyme action.



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**34.** What are nucleic acids? Enlist the point of difference among DNA and RNA.



**35.** What are the types of RNA? Mention the role of each class of RNA.



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**36.** What is metabolism? How metabolic pool is formed in the cell.



**37.** If double stranded DNA has 14% C (cytosine) what percent A (adenine), T(thymine) and G(gaunine) would you expect?



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**38.** Name the following: The term that describes all the chemical reactions taking place in an organism.



**39.** Name the following: The form in which carbohydrate is transported in a plant.



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**40.** Name the following: The reagent used for testing of reducing sugar.

