DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 10

Topic :- Biomolecules

1 **(c)**
Starch, glycogen, cellulose, chitin, etc. are homoglycans (glucans) containing only glucose units. Homoglycans are the polysaccharides having only one type of monosaccharide units in them.

2 **(c)**
There is no uncatalysed metabolic conversion in living systems. Even CO_2 dissolving in water, a physical process, is a catalysed reaction in living system

3 **(a)**
Vinblastin and curcumin are used as drugs

4 **(c)**
Enzymes are most functional at the temperature range of 30° — 50°C

5 **(d)**
Catalyzed reactions.
There is no uncatalysed metabolic conversion in living systems. Even CO_2 dissolving in water, a physical process, is a catalysed reaction in living systems

6 **(c)**
In humans and most other mammals, acetyl C0-A formed in liver during oxidation of fatty acids, can enter the citric acid cycle for production of energy or can be converted to ketone bodies, *e.g.*, acetone, acetoacetate and betahydroxy butyric acid.

8 **(b)**
Adenylic acid is not a nucleoside, it is a nucleotide

9 **(c)**
Glucose is degraded into lactic acid in skeletal muscles by a catabolic process as energy is liberated
Assembly of a protein from amino acids requires energy and hence, it is an anabolic

process

10 **(d)**

All statement are correct

11 **(c)**

The chemical and physical properties of amino acids are essentially of the amino, carboxyl and the *R* functional groups. Based on number of amino and carboxyl groups, these are acidic (*e.g.*, glutamic acid) and, basic (*e.g.*, lysine) neutral (*e.g.*, valine amino acids).

12 **(a)**

On the surface of enzyme, there are several sites for binding substrate molecules called active sites. It is lined by approximately 20 amino acids.

13 **(d)**

Collagen is the most abundant protein in animal world and Ribulose bisphosphate carboxylase-oxygenase (RUBISCO) is the most abundant protein in the whole of the biosphere.

14 **(b)**

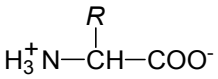
Monosaccharides are simple sugars with empirical formula $C_n(H_2O)_n$ and containing 3-7 ccarbon, *ie.*, trioses (3C), tetroses (4C), pentoses (5C) and hexoses (6C).

15 **(a)**

Primary structure of proteins is due to the present of peptide bond

16 **(c)**

A form of amino acid with both positive and negative charges simultaneously in the same molecule is called twitter ionic form



17 **(a)**

Removal of an amino group ($-NH_2$) frequently from an amino acid by transaminase enzyme is known as **deamination**. In mammals, deamination occurs chiefly in the liver.

18 **(b)**

Cofactors are non-proteinaceous constituents of conjugated enzyme which are associated with proteinaceous apoenzyme. These are divided into three categories.

1. **Prosthetic Groups**: Organic compound tightly bound to apoenzyme.
2. **Coenzyme**: Organic in nature and bound to apoenzyme at the time of course of action.
3. **Metal Ions**: Inorganic in nature.
4.

19 **(b)**

System at equilibrium cannot perform work. As living organisms work continuously, they make a constant effort to prevent falling into equilibrium

20 **(d)**

Chemical compounds that have molecular weightless than one thousand Dalton are usually referred to as biomolecules or micromolecules

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**c**	**c**	**a**	**c**	**d**	**c**	**d**	**b**	**c**	**d**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**c**	**a**	**d**	**b**	**a**	**c**	**a**	**b**	**b**	**d**