

# DPP

DAILY PRACTICE PROBLEMS

Class : XI<sup>th</sup>  
Date :

Subject : BIOLOGY  
DPP No. : 3

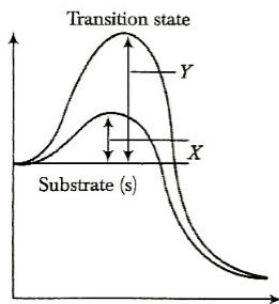
## Topic :- Biomolecules

1. A fatty acid has a carboxyl group attached to R group. The R group could be a  
a) Methyl  
b) Ethyl  
c) Higher number of  $-CH_2$  groups (1 to 19 carbons)  
d) All of the above
2. With reference to enzymes, which one of following statements is true?  
a) Apoenzyme=Holoenzyme+Coenzyme  
b) Holoenzyme=Apoenzyme+Coenzyme  
c) Coenzyme=Apoenzyme+Holoenzyme  
d) Holoenzyme=Coenzyme+Apoenzyme
3. Benedict's reagent test is conducted to confirm the presence of  
a) Polysaccharides like starch  
b) Lipids  
c) Reducing sugars  
d) Proteins
4. When a metabolic disequilibrium is in effect, then only cells continue to function  
How do cells avoid reaching metabolic equilibrium?  
a) Use feedback inhibition to turn off pathways  
b) The products of one reaction become the reactant of another reaction and are unable to accumulate  
c) Cellular metabolism utilises only those reactions that are irreversible  
d) Providing constant supply of enzymes
5. Which of the following radioisotope is not suitable for DNA labeling based studies?  
a)  $H^3$   
b)  $P^{32}$   
c)  $N^{15}$   
d)  $S^{35}$
6. Jacob and Monod named some enzymes as allosteric, whose activity is regulated by  
a) End product  
b) Substrate  
c) A by-product  
d) Coenzyme
7. Identify the term 'ash' in term of living tissue sample analysis from the statements given below  
Organic compounds oxidised to gaseous  
a) form ( $CO_2$  and water vapour) after burning of the tissue  
b) The material left after burning the tissue which contains inorganic elements (*e.g.*, calcium, magnesium etc.)  
c) Compounds removed in the form of gases  
d) Compounds which may be soluble in

intracellular fluid

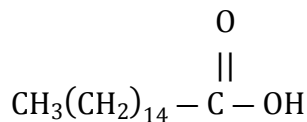
8. Grinding of a living tissue in trichloroacetic acid shows the presence of the inorganic compounds like sulphate, phosphate etc, which are categorised in
- a) Acid insoluble fraction
  - b) Acid soluble fraction
  - c) Both (a) and (b)
  - d) Not found in cellular pool
9. Formation of lactic acid from glucose occurs in... metabolic steps
- a) 25
  - b) 5
  - c) 30
  - d) 10
10. A nucleotide has three chemically distinct compounds. These are A, B and C. Choose the correct option for A, B and C
- a) A-Sugar, B-carbonates, C-chlorides
  - b) A-DNA, B-cellulose, C-chitin
  - c) A-Heterocyclic compound, B-Monosaccharide, C-a phosphate
  - d) A-Phosphoric acid, B-Proteins, C-acids
11. Answer briefly
- I. Hydrolysis of glycogen to glucose is termed as?
  - II. Name the enzyme which takes part in the hydrolysis of glycogen
  - III. Amylum is another name of
  - IV. Name the polysaccharide formed as the end product of the photosynthesis
- Correct option with all the answers is
- a) I-Glycogenolysis, II-Amylases, III-Starch, IV-Starch
  - b) I-Starch, II-Amylases, III-Glycogenolysis, IV-Starch
  - c) I-Starch, II-Glycogenolysis, III-Starch, IV-Amylases
  - d) I-Amylases, II-Glycogenolysis, III-Starch, IV-Starch
12. Which of the following is not a conjugated protein?
- a) Peptone
  - b) Phosphoprotein
  - c) Lipoprotein
  - d) Chromoprotein
13. .... is the most abundant protein in whole of the biosphere
- a) Collagen
  - b) Trypsin
  - c) Insulin
  - d) RUBISCO

14. Choose the correct option representing X and Y in the given graph



- |  |  |
|--|--|
| a) X-Activation energy without enzymes, Y-Activation energy with enzyme            | b) X- Activation energy with enzyme, Y-Activation energy without enzyme            |
| c) X-Substrate concentration with enzyme, Y-Substrate concentration without enzyme | d) X-Substrate concentration without enzyme, Y-Substrate concentration with enzyme |

15. Given below is the chemical formula of



- |                  |                 |             |              |
|------------------|-----------------|-------------|--------------|
| a) Palmitic acid | b) Stearic acid | c) Glycerol | d) Galactose |
|------------------|-----------------|-------------|--------------|

16. Which enzyme is useful as colour brightening agent in detergent industry?

- |            |           |             |              |
|------------|-----------|-------------|--------------|
| a) Amylase | b) Lipase | c) Protease | d) Cellulase |
|------------|-----------|-------------|--------------|

17. Locations or sites in the human DNA where single base DNA differences occur, are called

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|-------------------|---------|
| a) Repetitive DNA | b) VNTR |
| c) SNP            | d) SSCP |

18. An organic substance bound to an enzyme and essential for its activity, is called

- |             |               |              |              |
|-------------|---------------|--------------|--------------|
| a) Coenzyme | b) Holoenzyme | c) Apoenzyme | d) Isoenzyme |
|-------------|---------------|--------------|--------------|

19. Choose the correct statements

I. Bond energy (ATP) is utilised for biosynthesis, osmotic and mechanical work that we perform

II. When glucose is degraded into lactic acid in our muscles, energy of liberated

III. Assembly of a proteins from amino acids requires energy

IV. Majority of metabolic reactions can occur in isolation

V. There are many examples of uncatalysed metabolic reactions

- |                    |              |                 |                  |
|--------------------|--------------|-----------------|------------------|
| a) Except IV and V | b) I and III | c) All of these | d) None of these |
|--------------------|--------------|-----------------|------------------|

20. Maltose consists of which one of the following?

a)  $\beta$  – glucose and  $\alpha$  – galactose

b)  $\alpha$  – glucose and  $\alpha$  – fructose

c)  $\alpha$  – sucrose and  $\beta$  – glucose

d) Glucose and glucose

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