

DPP

DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Subject : BIOLOGY
DPP No. : 3

Topic :- Biomolecules

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

Organic compounds oxidised to gaseous form	b) The material left after burning the tissue which contains inorganic elements (<i>e.g.</i> , calcium, magnesium etc.)
a) (CO_2 and water vapour) after burning of the tissue	d) Compounds which may be soluble in intracellular fluid
c) Compounds removed in the form of gases	
- Grinding of a living tissue in trichloroacetic acid shows the presence of the inorganic compounds like sulphate, phosphate etc, which are categorised in
 - Acid insoluble fraction
 - Acid soluble fraction
 - Both (a) and (b)
 - Not found in cellular pool
- 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

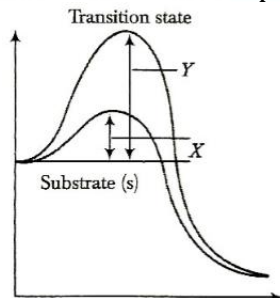
a) Collagen

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

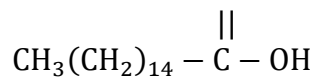
c) X-Substrate concentration with enzyme, Y-Substrate concentration without enzyme

b) X- Activation energy with enzyme, Y-Activation energy without enzyme

d) X-Substrate concentration without enzyme, Y-Substrate concentration with enzyme

15. Given below is the chemical formula of

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- 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
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) β - glucose and α - galactose b) α - glucose and α - fructose
c) α - sucrose and β - glucose d) Glucose and glucose