15. BIOMOLECULES

PREVIOUS EAMCET BITS

1. **How many tripeptides can be prepared by linking the amino acids glycine, alanine and phenyl alanine? (2009 E)**

1) One 2) Three 3) Six 4) Twelve

Ans : 3

Sol: Ala – gly – Ala, gly – Ala gly | Ala – phe – Ala, phe – Ala - Phe | gly – phe gly, phe – gly- phe

2. **A codon has a sequence of A, and specifies a particular B that is to be incorporated into a C. What are A, B, C? (2009 E)**

	A	B	C
1)	3 bases	amino acid	carbohydrate
2)	3 acids	carbohydrate	protein
3)	3 bases	protein	amino acid
4)	3 bases	amino acid	protein

Ans : 4

Sol: $\frac{3bases}{A}$ specifies a particular $\frac{a\min o\,acid}{B}$ that is to be incorporated into $\frac{protein}{C}$

3. **Which one of the following statements is not true for glucose? (2009 M)**

1) α -D (+) glucose undergoes mutarotation
2) It has four asymmetric carbons in Fischer projection formula
3) It gives saccharic acid with Tollen's reagent
4) It reacts with hydroxyl amine

Ans : 3

Sol: Tollen's reagent is a mild oxidizing agent. It gives gluconic acid with glucose.

4. **Hydrolysis of sucrose with dilute aqueous sulfuric acid yields [2008 E]**

1. 1:1D (+) – glucose; D –(–) fructose
2. 1:2D – (+) glucose; D –(–) fructose
3. 1:1D – (-)glucose; D –(+) fructose
4. 1:2D – (–)glucose; D –(+) –fructose

Ans : 1

Sol: $C_{12}H_{22}O_{11} + H_2O \xrightarrow{dil\,H_2SO_4}$

Sucrose

$C_6H_{12}O_6 + C_6H_{12}O_6$

D(+) glucose D(-) fructose

5. Match the following [2008 M]

List I (Vitamins	List II
A. B_1	i. Riboflavin
B. B_2	ii. Pantothenic acid
C. B_3	iii. Niacin
D. B_5	iv. Thiamine

The correct match i**s**

	A	B	C	D		A	B	C	D
1)	iv	i	iii	ii	2)	iv	iii	i	ii
3)	iii	iv	ii	i	4)	iv	i	ii	iii

Ans:4

Sol: A) B_1- Thiamin A-(iv)
B) B_2 – Riboflavin B-(i)
C) B_3 – pentothenic acid C – (ii)
D) B_5 – Niacin D- (iii)

6. **Which of the following biomolecules acts as specific catalysts in biological reactions? (2007 E)**

1) Carbohydrates 2) Lipids 3) Vitamins 4) Enzymes

Ans : 4

Sol : Enzymes are specific catalysts in biological reactions.

7. **A mixture of amylase and amylopectin is called** **(2007 M)**
1) Lactose 2) Starch 3) Cellulose 4) Sucrose

Ans : 2
Sol: Starch is a mixture of amylase and amylopectin.

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