NEW STANDARD ACADEMY

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CLASS 11 (Biology) DPP (Academy)14-05-2024

1. Sugars are technically called carbohydrates, referring to the fact that their formulae are only multiple of C(H2O). Hexoses therefore have six carbons twelve hydrogen and six oxygen atoms. Glucose is a hexose. Choose from among from the following another hexose.
   a) Fructose b) Erythrose
   c) Ribulose d) Ribose
2. When you take cells or tissue pieces and grind with an acid in a mortar and pestle, all the small biomolecules dissolve in the acid. Proteins polysaccharides and nucleic acids are insoluble in mineral acid and get precipitated. The acid soluble compounds include amino acids nucleosides small sugars etc. When one adds a phosphate group to a nucleoside one gets another acid soluble biomolecule called
   a) Nitrogen base b) Adenine
   c) Sugar phosphate d) Nucleotide.
3. When we homogenise any tissue in an acid the acid soluble pool represents
   a) Cytoplasm b) Cell membrane
   c) Nucleus c) Mitochondria
4. The most abundant chemical in living organisms could be
   a) Protein b) Water
   c) Sugar d) Nucleic acid
5. Glycogen is a homopolymer made of
   a) Glucose units b) Galactose units
   c) Ribose units d) Amino acids
6. Which of the following set consists of non – reducing disaccharides?
   a) Sucrose and galactose b) Maltose and cellobiose
   c) Sucrose and treholose d) Sucrose and cellobiose
7. Find the odd one out with respect to their monomers:
   a) Cellulose b) Glycogen
   c) Starch d) Inulin
8. Which of the following derivative of cellulose is used as artificial silk?
   a) Cellulose xanthate b) Cellulose acetate
   c) Cellulose nitrate d) Carboxymethyl cellulose
9. Polysaccharides are the component of
   a) Cell wall in plants b) cell wall in fungi
   c) Exoskeleton of arthropods d) All of these
10. A trilyceride has 3 fatty acids. The number of fatty acids in the phospholipid lecithin is
    a) 2 b) 0
    c) 3 d) 1

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CLASS 12 (Biology) DPP (Academy)14-05-2024

1. The enzyme DNA dependent RNA polymerase catalyzes the polymerization reaction in _____ direction
   a) Only 5'-3' b) Only 3'-5'
   c) Both a) and b) d) None of these
2. Claver leaf model of tRNA was suggested by
   a) Went b) Fleming
   c) Holley d) Meselson
3. Select an incorrect statement
   a) RNA was the first gentic material.
   b) Essential life processes evolved DNA.
   c) RNA used to act as a genetic material as well as a catalyst in the post.
   d) Some biochemical reactions in living systems are catalysed by RNA catalysts.
4. In proksryotes 23 S rRNA is synthesized by
   a) RNAP b) RNAP-I
   c) RNAP –II d) RNAP -III
5. RNA polymerase II transcribes
   a) hnRNA b) 50S tRNA
   c) 30S tRNA c) 40S tRNA
6. Which of the following rRNAs acts as structural RNA as well as ribozyme in bacteria?
   a) 5S rRNA b) 18SrRNA
   c) 23SrRNA d) 5.8 rRNA
7. With regard to mature mRNA in eukaryotes, which statement is correct?
   a) Both exons and introns are absent
   b) Both exons and introns are present
   c) Exons present and introns absent
   d) Introns Present, Exons absent
8. Gerorge beadle and Edward Tatum in the early 1940s worked on the
   a) Drosophila b) Neurospora crassa
   c) Pisum sativum d) Lathyrus sativus
9. Lactos operon produces enzymes
   a) $\beta-$ galactosidase, permease and glycogen synthetase
   b) $\beta-$ galactosidase, permease and transacetylase
   c) permease and glycogen synthetase and transacetylase
   d) $\beta-$ galactosidase, phosphoglucose ,isomerase and permease
10. The three codons which result in the termination of polypeptide chain synthesis are
    a) UAA,UAG,GUA
    b) UAA, UAG,UGA
    c) UAA,UGA,UUA
    d) UGU UAG,UGA