

FBQ1: The cell was discovered by _____ in 1665 year while examining a thin slice of cork under the microscope
Answer: *Robert Hooke*

FBQ2: The cell organelle that is involved in the degradation of worn-out cells and macromolecules is _____
Answer: *Lysosome*

FBQ3: The lipid component that forms the hydrophilic and hydrophobic regions of the plasma membrane is _____
Answer: *Phospholipids*

FBQ4: The transportation of materials across the plasma membrane is by _____ and _____ transport
Answer: *Passive and Active*

FBQ5: A solution whose pH is above 7 is said to be _____ solution
Answer: *Basic*

FBQ6: A solution that resist changes in pH of a solution when an acid or a base is added to it is _____
Answer: *Buffer*

FBQ7: Simple sugar also known as monosaccharide having six (6) carbon atoms are classified as _____
Answer: *Hexoses*

FBQ8: An example of epimer of glucose is _____
Answer: *D-Mannose*

FBQ9: An amino acid is linked to another amino acid in proteins by _____
Answer: *Peptide bond*

FBQ10: _____ are the amino acids that are not synthesized in the body but are required and must be provided to meet the body's need
Answer: *Essential amino acids*

FBQ11: Arachidic acid is an example of _____ fatty acids
Answer: *Unsaturated*

FBQ12: Omega 3 and Omega 6 are examples of _____ fatty acids
Answer: *Polyunsaturated*

FBQ13: The nucleic acid that lacks ribose sugar is the _____
Answer: *DNA*

FBQ14: The double helical structure of the DNA (Deoxyribonucleic acid) was proposed by _____ and _____
Answer: *Watson and Crick*

FBQ15: The enzyme that initiates the breakdown of carbohydrates in form of starch in the mouth is _____

Answer: *Ptylin*

FBQ16: The first reaction stage in the glycolysis which involves the phosphorylation of glucose to glucose-6-phosphate is catalyzed by _____ enzyme

Answer: *Glucokinase*

FBQ17: In a state where oxygen is not lacking, glucose is broken down into _____ in a series of enzyme catalyzed reactions

Answer: *Pyruvate*

FBQ18: The Krebs cycle takes place in the _____ of eukaryotic organisms

Answer: *Mitochondrion matrix*

FBQ19: _____ total number of ATP is generated in the form of energy from the tricarboxylic acid (TCA) cycle

Answer: *10*

FBQ20: The product formed in the first step reaction of the citric acid cycle is _____

Answer: *Citrate*

FBQ21: The breakdown of protein molecules by proteolytic digestive enzymes is called _____

Answer: *Proteolysis*

FBQ22: The urea cycle occurs first in _____ and then further occurs in cytosol of the liver

Answer: *Mitochondria*

FBQ23: The enzymes that digest lipids are generally called _____

Answer: *Lipase*

FBQ24: Beta (β) oxidation of fatty acids is the oxidation of fatty acids to _____

Answer: *Acetyl-Co A*

FBQ25: Vitamin B complex and Vitamin C are classes of _____ Vitamin

Answer: *Water soluble*

FBQ26: Beriberi is a deficiency associated with _____

Answer: *Vitamin B*

FBQ27: The class of vitamins that also act as co-enzymes are _____

Answer: *Water-soluble vitamins*

FBQ28: Vitamins A, D, E and K are all examples of _____ vitamins.

Answer: *Fat-soluble*

FBQ29: Vitamin E exists in the diet as compounds called _____

Answer: *Tocopherol*

FBQ30: Trace minerals are minerals that are required in the body in less than _____ mg

Answer: *100*

FBQ31: Sodium, magnesium and calcium are examples of _____ minerals

Answer: *Macro*

FBQ32: Apart from the liver, the kidney and the _____ are the other organs involved in detoxification process of harmful compounds in the body

Answer: *Intestines*

FBQ33: Oxidation, reduction and hydrolysis belongs to _____ phase of detoxification

Answer: *Phase 1*

FBQ34: In detoxification process, the reaction that involves the coupling of foreign substances after undergoing oxidation, reduction and hydrolysis is called _____ reaction

Answer: *Conjugation*

FBQ35: The purpose of detoxification is to convert toxic harmful substances to _____ harmful substances

Answer: *Less*

FBQ36: The cell organelle that contains antioxidant enzymes which are involved in detoxification of radicals is _____

Answer: *Peroxisomes*

FBQ37: The vitamin that promotes bone mineralization is _____

Answer: *Vitamin D*

FBQ38: Nucleic acid are located in the _____ of living organisms

Answer: *Nucleus*

FBQ39: The transfer of amino group from one amino acid to another is called _____

Answer: *Transamination*

FBQ40: There are _____ number of carbon atoms in Myristic fatty acid

Answer: *Fourteen*

FBQ41: The principal informational macromolecule that translates and transfer genetic information is the _____

Answer: *Deoxyribonucleic acid*

FBQ42: Pyruvate dehydrogenase complex enzyme is made up of _____ number of enzymes

Answer: *Three*

FBQ43: One of the toxicity associated with Iron (Fe) is Diabetes mellitus. True or False?

Answer: *False*

FBQ44: There are _____ number of carbon atoms in Arachidic fatty acid

Answer: *Twenty*

FBQ45: One of the symptoms of deficiency of essential amino acid is Growth retardation? True or False

Answer: *True*

FBQ46: During β -oxidation of fatty acid, the first reaction which involves the activation of fatty acids takes place in _____ organelle of the cell

Answer: *Cytosol*

FBQ47: Transamination reaction is a reversible reaction True or False?

Answer: *True*

FBQ48: There are _____ number of carbon atoms in Palmitic fatty acid

Answer: *Sixteen*

FBQ49: The position of the double bond in palmitoleic acid is at _____ carbon position

Answer: *Nine*

FBQ50: The pH of a solution with hydrogen ion (H^+) concentration of 4.2×10^{-3} is _____

Answer: *2.38*

Multiple Choice Questions (MCQs):

MCQ1: Eukaryotes are different from prokaryotes because they are organisms with _____

Answer: Distinct nucleus and but no nuclear membrane

MCQ2: The end product of glycolytic pathway in aerobic state is _____

Answer: Pyruvate

MCQ3: _____ hydrogen bonds pair the adenine and thymine bases in deoxyribonucleic acid (DNA) structure

Answer: One

MCQ4: which among these represent amino acids is a glucogenic amino acid _____

Answer: Tryptophan

MCQ5: Maltose on condensation produces _____ and _____ monosaccharide sugars

Answer: Glucose and glucose

MCQ6: _____ cell organelle is referred to as the power house of the cell
Answer: Nucleus

MCQ7: A high pH value is an indication of _____ hydrogen ion
Answer: High

MCQ8: Omega 3 and Omega 6 are also known as _____ fatty acids
Answer: Essential

MCQ9: Which of these enzymes hydrolyzes the breakage of α -1, 4 linkage in starch _____
Answer: Lipase

MCQ10: The minerals that are needed in large amount in the body are called _____ minerals
Answer: Trace

MCQ11: The process of detoxification which involves conversion of hydrocarbons to their corresponding alcohol is called _____
Answer: Oxidation

MCQ12: _____ is the deficiency associated with Vitamin C
Answer: Beriberi

MCQ13: Reactions of the urea cycle takes place in _____ and _____ of the liver
Answer: Mitochondria and cytosol

MCQ14: Vitamins that are easily absorbed in the body are _____ vitamins
Answer: Fat soluble

MCQ15: One of the things that makes plant cell different from animal cell is the present of _____ which is present in plant cell but absent in animal cell
Answer: Chloroplast

MCQ16: Oxidative phosphorylation takes place in _____?
Answer: Nucleus

MCQ17: The digestive enzymes that hydrolyzes protein are called _____
Answer: Trypsinase

MCQ18: The urea cycle shows the complete degradation of _____
Answer: Uric acid

MCQ19: Acidosis is a condition in which the blood plasma pH is _____
Answer: Fast

MCQ20: _____ vitamins also act as a co-enzyme
Answer: A

MCQ21: DNA differs from RNA because of _____

Answer: It produces protein

MCQ22: The branch of biochemistry that involves manipulation of DNA to improve drug research and solve health problem is _____

Answer: Toxicology

MCQ23: _____ is an example of epimer of glucose

Answer: Mannose

MCQ24: Which of these proteins is more water soluble _____

Answer: Albumin

MCQ25: Which of these makes lipids different from carbohydrates _____

Answer: Lipids digestion begins in the mouth

MCQ26: Which of these are esters of fatty acids _____

Answer: Triglycerides

MCQ27: _____ are substances that resist changes in pH

Answer: Enzymes

MCQ28: The breakdown of large molecules to smaller molecules in the living system of organisms is called _____

Answer: Amphibolism

MCQ29: Biochemistry is the study of _____

Answer: Living cell

MCQ30: An aggregation of cell forms _____

Answer: Tissue

MCQ31: One major function of the plasma membrane is _____

Answer: it control the activity of the cell

MCQ32: The branch of biochemistry that studies the adverse effects of foreign substances on living organisms is _____

Answer: Toxicology

MCQ33: _____ is the end product of beta (β) oxidation

Answer: Carbon (iv) oxide

MCQ34: The replacement of depleted intermediates of the Krebs cycle is called _____

Answer: Anaplerosis

MCQ35: The major site for the breakdown of harmful substances is _____

Answer: Liver

MCQ36: Water is referred to as a weak electrolytes because it can undergo partial dissociation into _____ and _____

Answer: Hydrogen ion and hydroxide ion

MCQ37: Water is referred to as a weak electrolytes because it can undergo partial dissociation into _____ and _____

Answer: Hydrogen ion and hydroxide ion

MCQ38: In preparing a buffer, _____ equation is used to calculate the concentrations of acid and base components of the buffer

Answer: Equilibrium equation

MCQ39: _____ is also known as animal starch

Answer: Glucose

MCQ40: _____ and _____ linkages are present in linear and branching points of glycogen

Answer: α -1,4 and α -1,6

MCQ41: Isomers differing as a result of variations in the configurations of OH and H on carbon atoms 2, 3 and 4 of glucose are called _____

Answer: Epimers

MCQ42: Amino acids in solution at neutral pH which are dipolar ions are also called _____

Answer: Radicals

MCQ43: The abbreviation GIN represents _____ amino acids

Answer: Glycine

MCQ44: Proteins that yield only amino acids with no other major organic or inorganic hydrolysis products are called _____ proteins

Answer: Simple

MCQ45: The position of double bond in oleic acid is at carbon position number _____

Answer: 12

MCQ46: _____ are hydrolytic products of simple and compound lipids

Answer: Simple

MCQ47: During digestion of carbohydrates in the mouth, amylase requires _____ ion for its activation

Answer: Chloride

MCQ48: The Krebs's cycle produces _____ number of NADH and _____ number of FADH

Answer: 3 and 1

MCQ49: The required daily allowance of Vitamin C is _____ per day

Answer: 120 mg

MCQ50: The required daily allowance of Zinc for men and women respectively is

Answer: 11 and 8 mg