1. Sara is a chemistry who is carrying out an experiment between an alcohol and acetic acid in the laboratory. The product formed at the end of the experiment will be:
   - Glycogen and water molecule
   - Glucose and oxygen
   - An ester and water molecule
   - Glycerol and Sulfuric acid
2. The finger like infoldings which are formed by inner membrane of mitochondria are called:
   - Ribosomes
   - Matrix
   - Porin
   - Cristae
3. The main neurotransmitter for synapses is ----- which lie outside the central nervous system.
   - Acetylcholine
   - Acetaldehyde
   - Choline
   - Phosphatidylcholine
4. The structure present in a present eukaryotic cell but absent in prokaryotic cells is
   - DNA
   - Ribosomes
   - Cell surface membrane
   - Nucleus
5. If water has high latent heat vapourisation, how this property of water could be helpful to plants and animals
   - With the release of large amount of water vapours, a small amount of heat loss can take place
   - With the release of small amount of water vapours, a great amount of heat loss can take place
   - It will keep their temperature very high.
   - No cooling effect with the release of even large amount of water vapours
6. Which cell organelle is responsible for cell secretion?
   - Chloroplast
   - Golgi body
   - Ribosomes
   - Mitochondrion
7. Now a days every new born gets regular shots of vaccine for polio.it contains ------ for polio to make a child immune against this disease.
   - Antibiotics
   - Antibodies
   - Antigens
   - Antisera
8. Change in frequency of alleles that occurs by chance is called as:
   - Genetic drift
   - Mutation
   - Migration
   - Natural selection
9. Lipids contain double amount of energy as compared to the same amount of carbohydrates due to the presence of:
   - Higher proportion of C-H bonds
   - Higher proportion of C-O bonds
   - Higher proportion of oxygen
   - Lower proportion of C-H bonds
10. The phase of mitosis in which sister chromatids move towards opposite poles:
    - Anaphase
    - Metaphase
    - Prophase
    - Telophase
11. Starch is present in tubers, fruits and grains but absent in animal cells instead animals have a substance stored in liver and muscles known as:
    - galactose
    - glucagon
    - glycogen
    - glucose
12. Thin filament of muscles contain ---- chains of actin molecules.
    - Two
    - One
    - Three
    - Four
13. The reflex action is the phenomena which only involves:
    - Receptors and effectors
    - receptors, effectors and spinal cord
    - Brain receptors, and spinal cord
    - receptors, neurons, brain
14. Complementary DNA molecules is:
    - DNA from mRNA
    - An artificial DNA
    - Single stranded DNA
    - A small segment of chromosomal DNA
15. What is common in both competitive and non- competitive inhibition?
    - Feedback inhibition
    - Irreversible inhibition
    - Non-Reversible inhibition
    - Reversible inhibition
16. Meselson and Stahl transferred few bacteria grown in N^{15} medium to N^{14} medium for replicating their DNA. What would be the result after two rounds of replication?
    - 100% heavy duplex
    - 100% hybird duplex
    - 50% hybird duplex and 50% heavy duplex
    - 50% hybird duplex and 50% light duplex
17. In an action potential, the permeability of sodium ions in the neurons increase due to:
    - Repolarization
    - Sodium ions forming an ionic bonding
    - The opening of sodium channels/gates
    - The action of the cetylcholinesterase enzyme
18. In which situation, Genes are not assorted independently during meiosis in a chromosomes?
    - When genes are linked and their loci are close to each other.
    - When some genes have mutated on the chromosomes
    - When there too many genes on a chromosomes
    - When genes are not linked and their loci are far apart
19. During spermatogenesis, the -----,which are haploid cells eventually mature into spermatozoa sperms:
    - Spermatogonia
    - Primary spermatocytes
    - Spermatids
    - Secondary spermatocytes
20. Site of protein synthesis is:
    - Lysosomes
    - Ribosomes
    - Golgi body
    - Jfhgf
21. The photosynthetic pigments of plants are arranged as clusters in thylakoid membranes. The reaction centers of theses clusters consist of molecules
    - Chlorophyll
    - ATP
    - Carotenoids
    - Glucose
22. Acetylcholine and Noradrenaline are two types ----- of used in our nervous system.
    - Enzymes
    - Channel and carrier proteins in the cell membrane of Neurone
    - Neurotransmitters
    - Hormones
23. The types of energy reduced by the enzymes for biological reaction to occur is called the
    - Light energy
    - Heat energy
    - Active energy
    - Activation energy
24. The prokaryotes posses small ribosomes of size:
    - 70S
    - 65S
    - 60S
    - 40S
25. Homozygous means:
    - Alleles is an organisms
    - Two different alleles of a gene
    - Having two identical genes
    - Having two identical alleles of a gene
26. Most proteins are made up of:
    - Kidney → ureter → urinary bladder → urethera
    - Urinary bladder → kidney → ureter → urethra
    - Kidney → urethra → urinary bladder → ureter
    - Kidney → ureter → urethra → urinary bladder →
27. Most proteins are made up of:
    - 10 types of amino acids
    - 20 types of amino acids
    - 170 types of amino acids
    - 16 types of amino acids
28. In genetics, the term locus refers to the ----- of the gene on the chromosome.
    - Position
    - Frequency
    - Copy
    - Inversion
29. Glycolysis takes place in the ---- of cell
    - Nucleus
    - Mitochondria
    - Golgi complex
    - Cytoplasm
30. A disease caused by gradual breakdown of the thin walls of alveoli is ---.
    - Androgens
    - Pyrogens
    - Pepsin
    - Prions
31. If a carrier haemophilic female (X^HX^h) is married to a haemophilic make (X^hY). What will be the ratio of presence of haemophilic in the children
    - 100% all females and males will be haemophilic
    - Females have 50% chance of getting haemophilic and males will be 100% haemophilic
    - carrier female 25% haemophilic female 25%, 25% normal male and 25% haemophilic male
    - females and males both have 50% chances of getting haemophilic
32. Substances responsible for increasing the set point of the hypothalamus are called:
    - Androgens
    - Pyrogens
    - Pepsin
    - Prions
33. DNA polymerase enzyme for PCR is isolated from bacteria thermos aquaticus because:
    - It can work at high speed
    - It can withstand high denaturation temperature.
    - It can withstand low denaturation temperature.
    - It can be used again and again.
34. Which of the following photosystem is involved in cyclic photophosphorylation?
    - PS II
    - PS I
    - PS I and PS II
    - PS III
35. Which hormonal pair would maintain the endometrium and make it receptive for implantation of embryo?
    - Luteinising hormone and progesterone
    - Estrogen and progesterone
    - Estrogen and follicle stimulating hormone
    - Luteinising hormone and follicle stimulating hormone
36. The thick filaments in a myofibril of muscles are made of -----
    - Myoglobin
    - Myosin
    - Actin
    - Haemoglobin
37. Messenger RNA after transcription?
    - GGGAUCUC
    - GGGATCTC
    - GGGAUCUC
    - GGGGTCTC
38. In chemiosmosis the proton (H^+) pumps moves from ------.
    - Stroma to lumen
    - Cytoplasm to Stroma
    - lumen to Stroma
    - Stroma to cytoplasm
39. Microtubule subunits are synthesized in ------ phase.
    - G_1
    - M
    - G_2
    - S
40. How many molecules of ATP would be utilized for photophosphorylation of one glucose molecule during glycolysis?
    - 3
    - 2
    - 4
    - 1
41. The function of calcium ions in muscle contraction is to:
    - Polarize visible light
    - Aid in the transmission of nerve impulse
    - Bind to troponin molecule and cause them to move
    - Bind to tropomyosin molecule and cause them to form cross bridges
42. According to the theory of natural selection organisms produce:
    - Offspring according to the resources available
    - Less Offspring than supported
    - Offspring to create resources
    - More Offspring than supported
43. A person married to the cousin and both are heterozygous for sickle cell anemia. Among their four kids what will be the proportion of affected homozygotes?
    - 75%
    - 50%
    - 100%
    - 25%
44. The major function of basophils is to:
    - Destroy small particles by phagocytosis
    - Release heparin to prevent blood clotting
    - Transport oxygen
    - Inactivate inflammation producing substances
45. Which enzymes is administered to the patients to severe combined immunodeficiency disease (SCID)?
    - Adenosine deaminase (ADA)
    - Pancreatic enzyme
    - β-galactosidase
    - β-lactamase
46. What is name of part C?
    - Collecting tubule
    - Proximal tubule
    - Distal tubule
    - Loope of henle
47. Inside ovary primary oocyte divides through first meiotic division forming two haploid cells, secondary oocytes and.
    - Ovum
    - Oogonium
    - Follicle cell
    - Polar body
48. Transgenic mice have been used to produce
    - Extra hair
    - A growth hormone
    - Protein rich milk
    - Protein rich meat
49. In plant which sugar is transported from source to sink through sieve tubes?
    - Glucose
    - Sucrose
    - Fructose
    - Starch
50. Which of the following hormone stimulates the ovulation from follicle into oviduct?
    - Estrogen
    - Progesterone
    - Luteinizing hormone
    - Follicle stimulating hormone
51. Which one is an example of nucleotide?
    - Adenosine
    - NAD
    - ATP
    - Guanine
52. Capsid the protective coat of a virus is made up of subunits known as capsomeres.
    - DNA
    - RNA
    - Protein
    - Lipid
53. If stimulation is above ---- impulses travel to the brain along the sensory neuron.
    - Recovery period
    - Resting potential
    - Action potential
    - Threshold
54. The covalent bond between two monosaccharides to form a disaccharide is called a:
    - Hydroxyl bond
    - Hydrogen bond
    - Carboxyl bond
    - Glycosidic bond
55. The structure of a fibrous protein comprises of polypeptide chains in the form of:
    - Custer
    - Spherical or curled up ball
    - Long stands
    - Flat uncoiled chain
56. Taxonomy includes the arrangement of organisms into different taxa.
    - Species, genus family, order class, phylum
    - Order, family, class, phylum, kingdom
    - Species, genus family, class, order, phylum
    - Species, genus, order, family, class, phylum
57. The plasmid pBR322 has antibiotic resistance genes for:
    - Streptomycin
    - Ampicillin and tetracycline
    - Tetracycline and Doxycycline
    - Doxycycline and Ampicillin
58. Which of the following blood vessels contain semilunar valves?
    - Arteries
    - Capillaries
    - Veins
    - Arterioles
59. The main nitrogenous excretory product of human is:
    - Ammonia
    - Urea
    - Ammonium
    - Uric Acid
60. If 15 μm size object is to observed under light microscope using 5X eyepiece and 10X objective its image size will be:
    - 750 μm
    - 500 μm
    - 50 μm
    - 250 μm
61. A person got an infection, he became ill but then he survived describe his developed immunity?
    - Active immunity
    - Artificially induce active immunity
    - Passive immunity
    - Naturally induce active immunity
62. The nitrogen containing baes in nucleotide are two types
    - Adenine, Guanine and cytosine
    - Guanine and cytosine
    - Adenine and Guanine
    - Adenine and thymine
63. The process in which a complementary copy of the code from a gene is produced by RNA polymerase in nucleus:
    - Transcription
    - Translation
    - Proof reading
    - DNA replication
64. Among followings which cellular organelle contains circular DNA similar to those found in bacteria?
    - Lysosome
    - Nucleus
    - Chloroplast
    - Ribosome
65. Large lymph vessels ultimately from large lymph duct which drains its lymph to:
    - Carotid and Aorta
    - Subclavian Artery
    - Vena cava and Aorta
    - Subclavian Vein
66. Xerophytes have small thick leaves to:
    - Help the float on water
    - Limit water loss by increasing the surface area
    - Help them survive in salty environment
    - Limit water loss reducing the surface area
67. Passive processes for the movement of molecules across cell surface membrane are:
    - Osmosis and phagocytosis
    - Pinocytosis and facilitated diffusion
    - facilitated diffusion and Osmosis
    - Diffusion and exocytosis
68. During the G2 phase:
    - Chromosome number is duplicate
    - The Chromosome are left with only one chromatid
    - Energy is stored for Chromosome movement and mitotic specific proteins are produced
    - Specific enzymes are synthesized and DNA base units are accumulated
69. During inspiration the space inside the chest cavity is increased due to:
    - The relaxation of the muscles of the diaphragm
    - Relaxation of the external intercostal muscles
    - Increase pressure
    - The contraction of the muscles of the diaphragm
70. Which is an example of a disaccharide
    - Starch
    - Lactose
    - Fructose
    - Glycogen
71. In glycine R is -----
    - Ethane
    - Fatty acid
    - Hydrogen
    - Methane
72. Blood group AB is an example of -----
    - Complete dominance
    - Co-dominance
    - Incomplete dominance
73. Smooth endoplasmic reticulum is responsible for the metabolism of:
    - Nucleic acids
    - Protein
    - Carbohydrates
    - Lipids
74. Among followings ----- enzymes naturally found in human immunodeficiency virus (HIV).
    - Ligase
    - Reverse transcriptase
    - RNA polymerase
    - DNA polymerase