

Biology MCQs

INTRODUCTION TO BIOLOGY MCQS :

1. Ecology deals with
 - a) Biotic factors of environment
 - b) Abiotic factors of Environment
 - c) Environmental relations
 - d) Both a&b

2. Histology is study of living organisms at _____ level.
 - a) Cell
 - b) Organ
 - c) Tissue
 - d) Community

3. Study of Geographical Distribution of animals is known as
 - a) Biogeography
 - b) Zoogeography
 - c) Animal Geo graphics
 - d) Non of above

4. Unicellular Plasmodium is studied under the branch of biology called
 - a) Microbiology
 - b) Cell Biology
 - c) Parasitology
 - d) Pathology

5. Study of life of ocean is
 - a) Sea Biology
 - b) Oceanography
 - c) Marine Biology
 - d) Ocean Ecology

6. Insulin preparation comes under which branch of biology
 - a) Social Biology
 - b) Biotechnology
 - c) Genetic Engineering
 - d) Parasitology

7. What is the right distribution of levels of study from smaller to larger
- Specie, community, population , Ecosystem
 - tissue, cell, organ, system
 - Individual, Specie, population, community
 - Organelle, tissue, organ, System
8. Term Vaccinization was discovered by
- Edward Jenner
 - Louis Pasteur
 - Emil Fischer
 - Robert Khoshland
9. Biopesticides have advantage over chemical pesticides because
- Pests can not develop resistance against them
 - They are cheaper
 - Non Pollutant
 - All of above
10. Cloning surely produces organisms that have identical
- genotype
 - phenotype
 - genome
 - All of above
1. The mechanism by which organisms maintain the stability of their cellular environment is known as;
- Homeostasis
 - Normal health
 - Structural adaption
 - Osmoregulation
2. When the concentration of external medium is equal to the concentration of internal medium of cell is called;
- Hypertonic
 - Hypotonic

- c. Isotonic
- d. Heterotonic

3. Brassica and rose plant belong to group of plants;

- a. Hydrophytes
- b. Mesophytes
- c. Xerophytes
- d. Succulents

4. Animals which are unable to adjust their internal salt concentration according to external environment is;

- a. Anhydrobiosis
- b. Osmoregulators
- c. Thermoregulatory
- d. Osmoconformers

5. Which one of the following animal can survive without drinking water?

- a. Kangaroo rat
- b. Pig
- c. Kangaroo
- d. Camel

6. Nitrogenous wastes are produced as a result of;

a. Photosynthesis

b. Ingestion

c. Assimilation

d. Deamination

7. Fresh water protozoans pumped out excess water by a special structure called;

a. Oral groove

b. Contractile vacuole

c. Pellicle

d. Vacuole

8. The term glycogenesis means, the conversion of;

a. glucose to Glycogen

b. Lactic acid to Glycogen

c. Glycogen to Glucose

d. Amino acid to Glycogen

9. Which one of the following nitrogenous compound is much more soluble in water?

a. Uric acid

b. Urea

c. Ammonia

d. Creatine

10. The removal of amino group from amino acid is called;

- a. Transamination
- b. Deamination
- c. Translocation
- d. Transposition

11. The amount of water required for the removal of 2 g of ammonia is;

- a. 200 ml
- b. 500 ml
- c. 100 ml
- d. 1000 ml

12. In flatworms excretory system consists of a net work of closed tubules with out internal openings are called;

- a. Nephridia
- b. Protonephridia
- c. Metanephridia
- d. Nephrostome

13. According to the removal of nitrogenous wastes, reptiles and birds are the examples of;

- a. Uricotelic
- b. Ammonotelic
- c. Ureotelic

d. Ammoniotelic

14. The functional unit of human kidney is called;

- a. Nephridia
- b. Collecting tubule
- c. Nephron
- d. Nephrotome

15. The end product of haemoglobin is the;

- a. Allontoin
- b. Bilirubin
- c. Xanthine
- d. Creatinine

16. All of the following are the plasma proteins synthesized by Liver, except that of;

- a. Albumin
- b. Prothrombin
- c. Glycogen
- d. Fibrinogen

17. Liver is a large organ, making the body weight up to;

- a. 2 -- 3 %
- b. 3 -- 6 %

- c. 1 -- 2 %
- d. 3 -- 5 %

18. The term Glycogenolysis means, the conversion of;

- a. Glucose into lactic acid
- b. Glucose into Glycogen
- c. Glucose into alcohol
- d. Glucose into amino acid

19. Liver store the vitamins A, D, E & K, which are the mainly;

- a. Fat soluble
- b. Cold water soluble
- c. Alcoholic soluble
- d. Hot water soluble

20. As human kidney has less than one percent of total body weight and with each cardiac cycle it receive the blood of about;

- a. 50 %
- b. 30 %
- c. 20 %
- d. 25 %

21. Creatinine is produced in;

- a. Liver

- b. Muscles
- c. Kidney
- d. Blood

22. All are related to urea cycle, except that of;

- a. Citruline
- b. Ornithene
- c. Arginine
- d. Creatinine

23. Urea leaves the kidney through;

- a. Ureter
- b. Urinary bladder
- c. Urethra
- d. pelvis

24. Urea is produced by a cyclic process in the liver known as;

- a. Urea or Ornithene cycle
- b. Urea or Citruline cycle
- c. Urea or Arginine cycle
- d. Both a & b

25. In man the expulsion of urine from the body the urethra is known as;

- a. Urination
- b. Elimination
- c. Micturition
- d. Filtration

26. Each nephron has a mass of blood capillaries which are partially enclosed by the blind ending region of the tubule is called;

- a. Glomerulus
- b. Bowman's capsule
- c. Loop of henle
- d. Vasa recta

27. The inner layer of the Bowman's capsule is made up of unusual cells called;

- a. Endothelial cells
- b. Basement membrane cells
- c. Ciliated cells
- d. Podocytes

28. The blood pressure in kidneys is higher than in the other organs. This high pressure is maintained because;

- a. The afferent arteriole has a large diameter and efferent arteriole has a smaller diameter
- b. Of the foot-like process of Podocytes
- c. Because of the Bowman's capsule
- d. The efferent arteriole has a large diameter than the afferent arteriole

29. Marine mammal such as whale has a very thick layer of insulating fat called blubber just under the skin, which one of the is not related to the adaptive value of this fat?

- a. Because it is insoluble in water, so does not affect the osmotic balance of the cells
- b. As fat is an energy storing compound, so it is utilized by the animal when storage of food
- c. Fat has low energy contents as compared to other energy storing compound such as glycogen
- d. Fat has an insulating function and having low heat conductivity

30. Which part of the Nephron maintains the normal pH of human blood?

- a. Bowman's capsule
- b. Ascending portion of henle loop
- c. Descending portion of henle loop
- d. Collecting duct

31. Which one of the following properties of water is the main contributory factor enabling homeotherms to adapt, to a range of environment?

- a. Water has a high heat of vaporization
- b. Water has high surface tension
- c. Water has maximum density at 4°C
- d. It has a low viscosity

32. Which of the following is a function of the liver?

- a. Regulation of plasma bicarbonate ions
- b. Storage of vitamin C

- c. Production of plasma albumin
- d. Production granulocytes

33. Which of the following is an endothermic?

- a. Humming birds
- b. Bat
- c. Fish
- d. Birds

34. Human maintains their high body temperature with in a narrow range of about;

- a. 36 -- 38 oC
- b. 35 -- 37 oC
- c. 37 -- 38 oC
- d. 37 -- 39 oC

35. In human being body temperature is regulated by a part of brain; the

- a. Thalamus
- b. Hypothalamus
- c. Medulla oblongata
- d. Cerebellum

36. Process of reabsorption is the movement of materials from;

- a. Filtrate to Glomerulus

- b. Filtrate to blood capillaries
- c. Glomerulus to filtrate
- d. Pelvis to filtrate

37. Which of the following chemicals displaces the set point of the hypothalamus?

- a. Antigen
- b. Antibodies
- c. Antibiotics
- d. Pyrogen

38. The most common kidney stone is;

- a. Calcium stone
- b. Oxalate stone
- c. Uric acid stone
- d. Carbonate stone

39. The nitrogenous excretory compounds formed in Earth-worm are the;

- a. Urea
- b. Ammonia
- c. Both a & b
- d. Uric acid

1. The matrix of the bone is composed of;

- a. Calcium phosphate
- b. Collagen
- c. Chitin
- d. Calcium carbonate

2. Hydrostatic skeleton is present in;

- a. E. Worm & Jelly fish
- b. Cockroach
- c. Cray fish
- d. Millipedes

3. The most rigid connective tissues are the;

- a. Tendons
- b. Ligaments
- c. Cartilage
- d. Bones

4. All of the following are related to cranial bones, except that of;

- a. Parietal
- b. Occipital

c. Vomer

d. Frontal

5. The structure formed by the fusion of anterior five pelvic vertebrae is the;

a. Axis

b. Sacrum

c. Atlas

d. Coccyx

6. Which one of the following posses single occipital condyle?

a. Fishes & Reptiles

b. Birds & Mammals

c. Birds & Amphibians

d. Reptiles & Birds

7. The antagonistic arrangement of skeletal muscles means the movement of muscles;

a. In the same direction

b. Against each other

c. with out friction

d. With out contraction & relaxation

8. Which one deos not take place during repair of bone?

a. Chondrocytes formation

- b. Hematoma formation
- c. Callus formation
- d. Bony callus

9. which one is not correct about the sliding filament model of muscle contraction?

- a. Length of A band is reduced
- b. Thick and thin filaments slide over each other
- c. Z - lines come lose together
- d. The I - band shortens

10. The fundamental contractile unit of a skeletal muscle is called;

- a. I - band
- b. sarcolemma
- c. Sarcomeres
- d. H - zone

11. Which one of the following acts as a shock absorber to cushion the tibia and the femur where they come together?

- a. Central disc
- b. Ligament
- c. Cartilage
- d. Tendons

12. A muscle is a muscle;

- a. Bundle
- b. Fiber
- c. Filament
- d. Fibril

13. The original function, in the first vertebrates, of the skeleton was to provide;

- a. Support for locomotion
- b. Minerals
- c. blood cells
- d. protection from enemies

14. Which one of the following connects the bone to bone?

- a. Tendon
- b. Cartilage
- c. Disc
- d. ligament

15. The original function is still performed today by bones of the;

- a. Jaw
- b. Pelvis
- c. Skull and rib cage
- d. Thigh

16. Which one of the following is likely to have the strongest leg bones?

- a. Jockey
- b. Swimmer
- c. Golfer
- d. Weight lifter

17. The fundamental, repeating unit of a skeletal myofibril is the;

- a. Motor unit
- b. Myosin cross bridge
- c. Sarcomere
- d. Sarcoplasmic reticulum

18. According to the now-established sliding- filament model of muscle contraction, the molecules that move o shorten a muscle are;

- a. Creatine phosphate
- b. Collagen
- c. Myosin
- d. Actin

19. Cross bridges, which connect the two molecules of a fibril during a muscle contraction, are made of;

- a. Troponin
- b. Tropomyosin
- c. Actin

d. Myosin

20. An oxygen debt develops during;

- a. An aerobic work
- b. Aerobic work
- c. Sarcoplasmic release
- d. Tetanus

21. The ion that must be present for binding of the cross bridges is;

- a. sodium ion
- b. Potassium ion
- c. Calcium ion
- d. Magnesium ion

22. The all-or-non phenomenon of muscle contraction refers to a maximum contraction or no contraction of a;

- a. Muscle
- b. Muscle fiber
- c. Muscle bundle
- d. Muscle fibril

23. An aerobic work becomes continue painful because of an accumulation of;

- a. Lactic acid
- b. Carbon dioxide

- c. Acetic acid
- d. Calcium ions

24. An all-out sprint cannot continue for more than about 45 seconds because the muscles;

- a. Accumulate acetylcholine on their plasma membranes
- b. Accumulate too much Creatine phosphate
- c. Run out of glycogen
- d. Run out of oxygen

25. The depression used for articulation of femur is called;

- a. Ischium
- b. Pubis
- c. Ilium
- d. Acetabulum

26. The mammals used on the hoofed tip of the toes are called;

- a. Unguligrades
- b. Plantigrades
- c. Digitigrades
- d. Saltatorials

27. The most prehistoric extinct bipedal vertebrates were the;

- a. Lobe finned fishes

- b. Amphibians
- c. Reptiles
- d. Mammals

28. keel the modified bone of sternum is present in;

- a. Dipnoi
- b. Reptiles
- c. Birds
- d. Mammals

29. The stream-line body structure is present in;

- a. Reptiles
- b. Fishes
- c. Mammals
- d. Amphibians

30. Star fish moves with the help of;

- a. Caudal fin
- b. Myonemes
- c. Tube feet
- d. Foot

31. Which of the following animal show accordion like locomotion?

- a. Jelly fish
- b. Earth-worm
- c. Tape-worm
- d. Amoeba

32. In man the contraction of which of the following muscles make the arm straight?

- a. Triceps Brachii
- b. Brachialis
- c. Biceps Brachii
- d. Brachioradialis

33. during contraction of muscles the calcium ions released from;

- a. Sarcomeres
- b. T - tubules
- c. Bone marrow
- d. Sarcoplasmic reticulum

34. A grass-hopper moves from place to place when it muscles;

- a. Pull it bones
- b. Push it bones
- c. Push it external plates
- d. Pull its external plates

35. An earth-worm moves from place to place;

- a. Peristaltic waves of contractions of circular and longitudinal muscles
- b. To and fro movements of many tiny parapodia
- c. Many small pseudopodia called Setae
- d. Rolling movements caused by statocysts

36. Tiny animals, such as the larvae of Cnidarians, move from place to place chiefly by;

- a. Cytoplasmic streaming
- b. The beating movement of cilia
- c. Contraction of muscle cells
- d. Amoeboid movement

37. The to-fro-movements of cilia and flagella in euglena & paramecium are caused by;

- a. Sliding microtubules
- b. Contracting microfilaments
- c. Elongating cell membranes
- d. Changes in turgor pressure

38. Which of the following is mismatched?

- a. Slightly moveable joint-vertebrate
- b. Hinge joint-Hip
- c. Synovial joint-elbow
- d. Immovable joint-Sutures in cranium

39. Which of these is direct source of energy?

- a. Adenosine Triphosphate
- b. Lactic acid
- c. Creatine phosphate
- d. Both a & b

40. When muscles contract;

- a. Sarcomeres increases in size
- b. Myosin slides past actin
- c. The "H-zone" disappears
- d. Calcium is taken up calcium storage sites

41. The chest cage of man is supported by number of ribs;

- a. Twenty four only
- b. Twelve pairs
- c. Ten pairs
- d. Both a & b

42. during bone fracture the mass of clotted blood is called;

- a. Remodeling
- b. Hematoma
- c. reduction

d. Bony callus

1. Viral genes are made of

- a. RNA only
- b. DNA only
- c. Either DNA or RNA
- d. Either protein or nucleic acid

2. A virion is a

- a. Virus
- b. Viral ribosome
- c. Viral lysosomes
- d. Viral gene

3. An isolated virus is not considered living since it

- a. Separates into two inert parts
- b. Cannot metabolize
- c. Rapidly loses its genome
- d. Is coated with air-tight, chemically inert shield

4. Most RNA viruses carry a gene for an enzyme that uses viral RNA as template in the synthesis of more viral RNA this enzyme is

- a. Reverse transcriptase

b. RNA polymerase

c. Viral nuclease

d. RNA replicase

5. The enzymes involved in viral replication are synthesized

a. On the viral ribosome

b. By the host cell

c. On the interior surface of the viral membrane

d. On the interior surface of the viral coat

6. Much of the research on gene expression has been done with E.coli, which inhabits the human intestine. This organism is a

a. Plasmid

b. Virus

c. Bacterium

d. Protozoan

7. In general bacterial genes are regulated at the time of

a. Transcription

b. Post-transcription

c. Translation

d. Conjugation

8. When DNA is exchanged via cytoplasmic bridges between two bacteria the process is called

- a. Transduction
- b. Conjugation
- c. Transformation
- d. Recombination

9. When a bacteriophage in its lytic phase carries some of the bacterium's partially digested chromosome with it to another host cell the process is called

- a. Conjugation
- b. Transformation
- c. Transduction
- d. Restricted transduction

10. A bacteriophage with a lysogenic cycle must have genes that are

- a. Made of RNA
- b. Made of double-stranded DNA
- c. Made of single-stranded RNA or DNA
- d. With in a circular nucleic acid molecule

11. which of the following fungus is used to give the flavour , aroma and Characteristics colour to some cheese?

- a. Yeast
- b. Ergot fungi
- c. Aspergillus

d. Penicillium

12. According to mode respiration which one of the following group of bacteria can grow either in the presence or absence of oxygen?

- a. Facultative bacteria (E.coli)
- b. Microaerophilic (campylobacter)
- c. Pseudomonas
- d. Spirochete

13. which one is true for Pox-viruses?

- a. RNA-enveloped
- b. DNA-non enveloped
- c. DNA-enveloped
- d. DNA-naked virion

14. A disease virus in which nerves are damaged is the

- a. Yellow fever
- b. Polio
- c. Measles
- d. Xerophthalmia

15. In some bacteria when division occurs in random plane it will produce an Arrangement called

- a. Streptococcus
- b. sarcina

- c. Diplococcus
- d. Staphylococcus

16. Gram positive bacteria are usually

- a. Cocci
- b. Bacilli
- c. Stained pink
- d. Spirochete

17. A viral disease in which brain of the host is affected is the

- a. Sleeping sickness
- b. Rabies
- c. Pellagra
- d. Typhoid

18. Mumps and measles viruses belong to group paramyxo-viruses which are the

- a. RNA enveloped viruses
- b. DNA naked viruses
- c. RNA non-enveloped
- d. DNA enveloped viruses

19. There are about known species of bacteria that causes the diseases in man

- a. 250

- b. 150
- c. 200
- d. 300

20. Morphologically the tobacco mosaic virus is the

- a. Round shape
- b. Tadpole like
- c. Cubical shape
- d. Rod shape

21. The flavour, all of the following is due to bacterial activity, except that of

- a. Butter milk
- b. Yogurt
- c. Ice cream
- d. Cheese

22. A scientist who established principles of immunity in "Anthrax & Rabies" was the

- a. Leeuwenhoek
- b. Pasteur
- c. Koch
- d. Jenner

23. The poison, produced by bacteria during infection in host is called

- a. Toxins
- b. Antitoxins
- c. Toxoids
- d. Aflatoxins

24. All of the following are antibiotics, except that of

- a. Penicillin
- b. Streptomycin
- c. Riboflavin
- d. Terramycin

25. Bacteria ranges in size, whereas, the staphylococcus & streptococcus are in diameter

- a. 0.75 to 1.25 μ m
- b. 1.1 to 1.50 μ m
- c. 2.0 to 6.0 μ m
- d. 0.75 to 1.75 μ m

26. Which one is true for periplasmic space, in different groups of bacteria

- a. Present in all gram -negative bacteria
- b. Present in all gram positive bacteria
- c. Present in few gram negative bacteria
- d. Present in all gram positive & few gram negative bacteria

27. The amount of lipid in outer noundry of gtam positive bacteria is about

- a. 1-4 %
- b. 11-12%
- c.8-11%
- d. 20-60%

28, Which one of the following antibiotics &related compounds cause permanent discoloration of teeth in young children

- a. Tetracyclin
- b. Terramycin
- c. Streptomycin
- d. Penicillin

29, Antibiotics are synthesized by certain organisms such as

- a. Penicillium
- b. Actinomycetes
- c. Both a%b
- d. Oscilleteria

30. Ecological role of fungi as decomposers is paralld only by

- a. Virus
- b. Bacteria
- c. Detrius
- d.Nematodes

31. Are very good bio-indicator of air quality as they are very sensitive to pollution

- a. Bacteria
- b. Mycorrhizae
- c. Lichens
- d. Water blooms

32. Induction is a process in which a viral DNA

- a. Enters into bacterial cell and attached with bacterial DNA
- b. Detached from bacterial DNA
- c. Destroy the bacterial DNA
- d. Multiply with bacterial DNA

EVOLUTION AND GENETICS

1. The idea of inheritance of acquired character was proposed by;

- a. Linnaeus
- b. Lamarck
- c. Darwin
- d. Wallace

2. From South America Darwin collected number of types of Finches;

- a. 20
- b. 11
- c. 15
- d. 13

3. Which one of the following mammals live only in America?

- a. Armadillos
- b. Elephant
- c. Opossum
- d. Echidna

4. Which one of the following Island is present near the coastline of South America?

- a. Cape verd
- b. Finland
- c. Galapagos
- d. Iceland

5. The oldest known fossils are of;

- a. Pisces
- b. Prokaryotes
- c. Protozoans

d. Algae

6. Archaeobacteria can tolerate temperature up to;

a. 100o C

b. 150 oC

c. 110 oC

d. 120 oC

7. Most fossils are found in;

a. Sedimentary rocks

b. Ingeous rock

c. Black soil

d. Lava flowa

8. Charles Darwin's book, On the origin of species by Means of Natural Selection, was first published in;

a. 1779

b. 1831

c. 1859

d. 1959

9. The primary mission of the "voyage of H.M.S.beagle" (1831 -- 1836) was to;

a. Carry arms to the new world

b. Chart the S.American coastline

- c. Find out how many species there were in the world
 - d. Disprove Lamarck's theory of inheritance
10. The wing of bird and the forelegs of a horse are;
- a. Vestigial structures
 - b. Analogous structures
 - c. Phylogenetic structures
 - d. Homologous structures
11. The struggle for existence is a consequence of;
- a. Each organism leaving more offspring than needed to replace it self
 - b. The inevitable difficulty of coping with climatic conditions
 - c. Territories and dominance hierarchies
 - d. Innate competitive tendencies
12. The idea of common descent was first suggested to Darwin by his observations on;
- a. Comparative embryology
 - b. Blood groups of birds
 - c. Geographical distribution of species
 - d. Human pedigrees
13. Fossil record shows that the earliest known vertebrate fossils were of;
- a. Mammals
 - b. Fishes

- c. Amphibians
- d. Reptiles

14. The structures which have common origin but different function is;

- a. Vestigial structure
- b. Analogous structure
- c. Adaptive structure
- d. Homologous structure

15. In terrestrial vertebrates, the gills are modified to form;

- a. Lungs
- b. Eustachian tube
- c. Ear muscles
- d. Larynx

16. A respiratory protein found in all aerobic species is the;

- a. Cytochromes-c
- b. Cytochromes-b
- c. Cytochromes-a
- d. Cytochromes-a₃

17. which one of the following cannot change allelic frequency?

- a. Migration

- b. Genetic drift
- c. Random mating
- d. Selection

18. The wings of a bird and the wings of an insect are;

- a. Analogous structures
- b. Phylogenetic structures
- c. Homologous structures
- d. Vestigial structures

19. The best test of the relatedness of two species is in the similarity of their;

- a. Anatomy
- b. Courtship behaviour
- c. Development
- d. DNA & Protein

20. The unit of evolution is now known to be the;

- a. Individual
- b. Population
- c. Family
- d. Species

21. The total collection of genes, at any one time, in a unit of evolution is called the;

- a. Genotype
- b. Phenotype
- c. Gene pool
- d. Multiple-allelic group

22. A potential danger to a population that has been greatly reduced in number is the;

- a. Loss of genetic variability
- b. Tendency towards assertive mating
- c. Reduced gene flow
- d. Hardy-Weinberg disequilibrium

23. The human blood groups -- A, B, AB, and O -- are an example of a;

- a. Dimorphism
- b. Mutation
- c. Gradeint of diploidy
- d. Allelomorphism

24. All alleles originate from;

- a. Crossing over
- b. Mutations
- c. Gene flow
- d. Non-disjunction

25. A beneficial allele increases more rapidly in frequency, if it is;

- a. Dominant
- b. Recessive
- c. Recently mutated
- d. Rare

26. Biologist who study the sequence of organisms in the fossil record are;

- a. Taxonomists
- b. Phycologists
- c. Paleobiologists
- d. Mycologists

27. The richest source of fossils is;

- a. Igneous rock
- b. Granite
- c. Basalt
- d. Sedimentary rock

28. How many possible phenotypes are there for the "ABO" blood groups?

- a. 4
- b. 6
- c. 8
- d. 16

29. The genotypic expression seen in a person of blood group "AB" is called;

- a. Dominant-recessive
- b. Incomplete dominance
- c. Co-dominance
- d. Over-dominance

30. The pelvis and the leg bones of a snake are;

- a. Homologous structures
- b. Vestigial structures
- c. Adaptive structures
- d. Analogous structures

31. A child with blood-group genotype I^A / I^B is born of a woman with genotype I^B / I^B , the father could not be a man of genotype;

- a. I^A / I^B
- b. I^A / I^A
- c. I^B / I^B
- d. I^A / i

32. The locus of gene that controls the "AOB" blood type is present on chromosome number;

- a. 11
- b. 21
- c. 7

d. 9

33. The pattern of sex determination found in protenor hug is;

- a. XO -- XX
- b. WZ -- ZZ
- c. Honey bee method
- d. XY -- XX

34. In monochromacy which types of light receiving cone cells are absent?

- a. Blue -- Green
- b. Red -- Blue
- c. Red -- Green
- d. Red -- Yellow

35. Which one is not correct for *Drosophila melanogaster*?

- a. XXY -- is fertile female
- b. XO -- fertile male
- c. XX -- is female
- d. XY -- male

36. Which one is not correct for recessive sex-linked inheritance?

- a. Gene for eye colour is present on "X" sex chromosomes
- b. Y -- chromosome is inert

- c. Female can be homozygous or heterozygous
- d. Sex - linked traits are more common in females as compared to males

37. The genes for blue Opsin protein are present on autosomal chromosomes number;

- a. 07
- b. 11
- c. 09
- d. 21

38. A woman receives her " X " chromosomes from;

- a. Her mother only
- b. Both her mother & her father
- c. Her father only
- d. Extra-nuclear DNA in her mother's egg

39. When a mutation is limited to the substitution of one nucleotide pair for another, it is called a;

- a. Point mutation
- b. Translocation
- c. Base inversion
- d. Sugar-phosphate deletion

40. The creation of mutations is called;

- a. Evolution

- b. Radiation
- c. Mutagenesis
- d. Saltatory changes

41. The father of a girl is hemophilic but mother is normal. she may be;

- a. hemophilic
- b. Carrier
- c. Normal
- d. None of these

42. Genes not located within the nucleus are almost always located in the;

- a. Cytosol
- b. Cell membrane
- c. Cytoskeleton
- d. Organelles

key

- 1.b
- 2.d
- 3.a
- 4.c
- 5.b
- 6.d

7.a

8.c

9.b

10.d

11.a

12.c

13.b

14.d

15.b

16.a

17.c

18.a

19.d

20.b

21.c

22.a

23.d

24.b

25.a

26.c

27.d

28.a

29.c

30.b

31.b

32.d

33.a

34.c

35.b

36.d

37.a

38.b

39.a

40.c

41.b

42.d

BIOLOGY MCQS

1. which of the following plants is rich in atropine drug

a. datura

b. red pepper

c. petunia

d. nicotiana tobacum

2. how many carbon atoms are there in a molecule of Ribulose biphospahte?

a. three

b. four

c. five

d. six

3. which one of the following is an ornamental plant?

a. physalis

b. melangena

c. atropa

d. petunia

4. plant donot store carbohydrates as glucose because it is

a. attracts insect herbivores

b. dissolves in water thereby altering the osmotic balance

c. is an unstable molecule

d. would replace ribose in DNA replication

5. which of the following organisms are involed in the spreading of cholera and hepatitis?

a. house fly

b. mosquito

c. tse tse

d. locust

6. which one is not true for grade radiate?

a. radially symmetry

b. diploblastic

c. coelomate

d. body with single opening

7. which one of the following round worm is cosmopolitan?

a. hook worm

b. pin worm

c. thread worm

d. fillaria

8. taenia is an endoparasite of human cattle and pig that completes its life cycle in two hosts the intermediate host is the

a. snail

b. sheep & man

c. sheep

d. pig & cattle

9. which one of the following groups of animals are acoclomste?

a. nematode

b. flat worms

c. cnidarians

d. aschelminthes

10. the genus rabditis contains "enterobius vermicularis" which is commonly known as

a. pin worm

b. thread worm

c. hook worm

d. round worm

11. coelom is cavity present b/w body wall & alimentary canal and is lined by

a. ectoderm

b. endoderm

c. mesoderm

d. choanoderm

12. proglottids are related to which of the following animals?

a. fasciola

b. schistosoma

c. dugesia

d. taenia

13. protandrous mode of sexual is found in

a. aurelia

b. sponges

c. hydra

d. obelia

14. in which of the following flat worms the digestive system is absent?

a. tape worms

b. liver fluke

c. hydra

d. blood fluke

15. the name cnidaria has been given to this group of animals due to the presence of special cells called

a. nematocysts

b. cnidocytes

c. pinachocytes

d. choanocytes

16. in which group of animal phyla alternation of generation is present

a. coelenterate

b. nematodes

c. aschelminthes

d. parazoa

17. pseudocoelom of round worms consists of a number of vacuolated cells filled with a protein rich fluid that devolves high

a. osmotic pressure

b. partial pressure

c. hydrostatic pressure

d. diffusion pressure

18. many colonial coelenterates such as "Corals" produce a hard exoskeleton composed of

a. sodium carbonate

b. calcium carbonate

c. calcium phosphate

d. silicon dioxide

19. in flat worms the excretory system consists of branching tubes ending in bulb like cells called

a. glomerulus

b. nephrostome

c. flame cells

d. nephridia

20. in multicellular organisms the integumentary and nervous system develop from

a. mesoderm

b. archenteron

c. endoderm

d. ectoderm

21. in sponges the inner body layer is made of special flagellated collar cells called

a. pinachocytes

b. choanocytes

c. gelatinous mesenchyma

d. amoeboid cells

22. acyclostoma dueodenela a parasite of human small intestine is commonly known as

a. hook worm

b. pin worm

c. thread worm

d. guinae worm

23. which one of the following parasitic flat worm lives in the bile duct of its host

a. taenia worm

- b. dugesia
- c. fasciola hepatica
- d. tape worm

24. in asymmetrical parazoa the skeleton is in the form of variously shaped needle like structure called

- a. calcareous shell
- b. spicules
- c. siliceous shell
- d. keratinized shell

25. in hydra alternation of generation is absent and it exist only in

- a. medusae form
- b. conozoid form
- c. gastrozoid form
- d. polyps form

26. the stony mass of living coelenterate is called

- a. corals
- b. coral leef
- c. polyps
- d. medrepora

27. the bark which of the following plants are used in tanning industry

- a. bauhinia verigata
- b. tamarindus indica
- c. cassia senna
- d. both a & b

BIOLOGY TEST

1. In Ireland people are completely dependent on
 - a. potatoes
 - b. tomatoes
 - c. tobacco
 - d. red pepper

2. Capsicum annum is the scientific name of
 - a. datura
 - b. tobacco
 - c. red pepper
 - d. black pepper

3. Which one of the following is the favourite home garden vegetable that was once believed to be poisoned
 - a. physalis
 - b. Lippisicum esculentum
 - c. Solanum melongena
 - d. Atropa belladonna

4. photosynthetic autotrophs get their energy from

- a. heat
- b. inorganic molecules
- c. organic molecules
- d. light

5. in 1930 van neil hypothesised that oxygen atoms in the oxygen gas released by plants come from

- a. carbon dioxide
- b. water
- c. glucose
- d. chlorophyll

6. in plant cell .the dark reactions of photosynthesis takes place in

- a. stroma
- b. thylakoids
- c. granum
- d. lamellae

7. which of the following colors of light work best for photosynthesis

- a. green&blue
- b. red%green
- c. blue&red

d. violet&orange

8. a description of wavelength absorbed by a pigment is called its

- a. action spectrum
- b. antenna cells
- c. reaction center
- d. absorption spectrum

9. production of NADPH in a chloroplast takes place during

- a. dark reaction
- b. non-cyclic photophosphorylation
- c. cyclic photophosphorylation
- d. chemiosis

10. which of the following plant leaves are used for curing of ring worm skin disease

- a. cassia alata
- b. cassia fistula
- c. bauhinia vegetaria
- dd. tamarindus indica

11. which one of the following process releases a carbon dioxide molecule

- a. glycolysis
- b. lactic acid fermentation

- c. alcoholic fermentation
- d. hydrolysis of glycogen

12. when yeast is producing wine, which of the following is not formed

- a. pyruvic acid
- b. acetyl co enzyme-A
- c. ethanol
- d. carbon dioxide

13. in the conversion of pyruvic acid to acetyl coenzyme -A, pyruvic acid is

- a. oxidised
- b. isomerized
- c. broken into one carbon fragment
- d. reduced

14. how many carbon atoms are in an oxaloacetate molecule, which joins with an acetyl group during step -1 in krebs cycle

- a. 2
- b. 3
- c. 4
- d. 6

15. in ETC, the final acceptor of electron is

- a. cytochrome -b

b. cytochrome a3

c. oxygen

16. the atom within each cytochrome molecule that actually accepts and releases electrons is

a. carbon

b. iron

c. zink

d. oxygen

17. how many carbon atoms are in citric acid molecule?

a. four

b. six

c. three

d. five

18. in aerobic cellular respiration most of the ATP is synthesized during

a. electron transport chain

b. glycolysis

c. citric acid cycle

d. oxidation of pyruvate

19. in eukaryotic cell the krebs citric acid cycle and terminal electron transport take place

a. with in the nucleus

b. on rough ER

c. in the cytoplasm

d. with in the mitochondria

20. the inner membrane of mitochondria is very selective about what it normally allows to leave the organelle. one molecule that regularly passes out of a mitochondria is

- a. citric acid
- b. ATP
- c. pyruvic acid
- d. glucose

21. the function of the mitochondrial cristae is to

- a. prevent escape O₂ gas
- b. store co-enzyme-A
- c. increase the surface area of the inner membrane
- d. increase the availability of phospholipids

22. a source of protons for the proton gradient within chloroplast is

- a. water
- b. chlorophyll
- c. CH₂O
- d. phospholipids within thylakoid membranes

23. the molecule in the Calvin-Benson cycle that combines with carbon dioxide is

- a. glyceraldehyde phosphate
- b. ribulose biphosphate
- c. phosphoenolpyruvate
- d. 1, 3 biphosphoglycerate

24. how many carbon atoms are there in a molecule of glyceraldehyde phosphate

- a. four
- b. five
- c. three

d. six

25. the source of hydrogen atom for the synthesis of glucose is

a. H_2O

b. $FADH_2$

c. $n(CH_2O)$

d. NADPH

26. an edible fruit, the husk tomato obtained from the plant family the

a. poaceae

b. solanaceae

c. ceasalpiniaceae

d. cassia family

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