**VARIETY OF ORGANISMS**

**CLASSIFICATION**

1. Multicellular organisms without tissue grade are called?
2. Protozoa
3. Parazoa
4. Eumetazoa
5. None of the above
6. Which of these animals are triploblastic?
7. Hydra
8. Sponges
9. Tapeworm
10. Corals
11. The chlorophyll of cyanobacteria is located in a flattened membranous structure known as ?
12. Thylakoids
13. Alkaloids
14. Lutein
15. Hydathode
16. When conditions are unfavourable for growth, some bacteria form?
17. Cysts
18. Spores
19. Filaments
20. Capsid
21. The group mollusca is characterized by the presence of ------?
22. Jointed appendages
23. Steer-shaped bodies
24. Backbone
25. Non-segmented body
26. The head formation or cephalization happened for the first time in phylum
27. Arthropoda
28. Annelid
29. Mollusca
30. Echinodermata
31. The segmented body muscles in fishes are called
32. Smooth muscles
33. Visceral muscles
34. Myotomes
35. Skeletal muscles
36. Which among the following is considered as a defeated group?
37. Amphibians
38. Reptiles
39. Mammals
40. Fishes
41. Which of the following is not a character of mammals
42. Diaphragm
43. Right aortic arch
44. Mammary glands
45. Corpus callosum
46. The chlorogogen cells on the wall of the intestine in earthworm is meant for?
47. Digestion
48. Circulation
49. Excretion
50. Reproduction
51. The uropygeal gland of pigeon are found
52. In the alimentary canal
53. In the brain
54. In the reproductive system
55. Above the tail
56. Limbless amphibians are?
57. Frogs
58. Toads
59. Salamanders
60. Caecilians
61. In Earthworm, the clifellum is present in segments
62. 5 to 10
63. 14 to 17
64. 13 to 18
65. 20 to 25
66. The muscle fold found in the dorsal wall in the intestine of the earthworm is
67. Diaphragm
68. Typhlosole
69. Myotome
70. Ommatidium
71. Which of the following is not a gymnosperm
72. Anetals
73. Conifers
74. Gingkos
75. Osmunda
76. Cycad
77. The largest group in the plant kingdom is?
78. Pteridophyta
79. Angiosperm
80. Gymnosperm
81. Bryophyte
82. Which of the classes of vetebrata has two chambered heart in the larva stage and three chambered heart in the Adult stage?
83. Pisces
84. Amphibian
85. Reptilian
86. Mammalian
87. Aves
88. Which of the following is not Homoiothermic?
89. Pangolin
90. Seal
91. Newt
92. Pigeon
93. At the under surface of the pileus of the mushroom, are gill-like structures, where the ---------- hyphae are located?
94. Respiratory
95. Excretory
96. Reproductive
97. Digrestive
98. The cephalothorax of Arachnids bears two pairs of appendages, pedipalps and chelicerae, used for?
99. Feeding
100. Defence
101. Excretion
102. Spinning webs

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. A | 1. C | 1. A |
| 1. B | 1. D | 1. B |
| 1. C | 1. A | 1. B |
| 1. C | 1. D | 1. D |
| 1. C | 1. B | 1. D |
| 1. B | 1. B | 1. C |
| 1. C | 1. A |  |

**ORGANIZATION OF LIFE**

1. Enzymes are ----------
2. Organelles
3. Macromolecules
4. Cell
5. Tissue
6. Hydra falls under which organization of life?
7. Cell
8. Tissue
9. Organ
10. System
11. Ixora plant is in which organization of life?
12. Organ
13. Tissue
14. Organism
15. Cell
16. Systems
17. Chlamydomonas, Euglena, paramecium and amoeba belong to which organization of life?
18. Cell
19. Tissue
20. Macromolecule
21. System
22. DNA and RNA falls under which organization of life?
23. Cell
24. Tissue
25. Macromolecule
26. Organ
27. Hibiscus flower is
28. Tissue
29. An organ
30. System
31. Cell
32. Which of the following is not an organ?
33. Leaf
34. Kidney
35. Heart
36. Bone
37. The ultimate source of Energy is?
38. Plants
39. Sun
40. Animals
41. Food
42. The correct sequence of levels of organization is?
43. Tissue ---- Cells ------ organs -------- systems
44. Systems ------ tissues ------- organs ------- cell
45. Cells ------- tissues ------ organs -------- system
46. Systems ------ cells -------- tissues------ organs
47. Which of the following convert Radiant Energy into chemical energy
48. Nerve cells
49. Muscle cells
50. Chloroplasts
51. Mitochondrion

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. B | 1. C |
| 1. A | 1. C | 1. B |
| 1. D | 1. B | 1. C |
| 1. C |  |  |

**NUTRITION**

1. One of the following is not a test for proteins, which is it?
2. Emulsion test
3. Millions test
4. Xanthoproteic test
5. Peptide linkage test
6. When sucrose reacts with concentrated tetraoxosulphate (VI) acid, one of the products is?
7. Carbon (II) oxide
8. Carbon (IV) oxide
9. Charcoal
10. Coal tar
11. A carbonhydrate that needs to be hydrolyzed before it shows reducing property is?
12. Glucose
13. Fructose
14. Maltose
15. Sucrose
16. The complete enzyme hydrolysis of starch yields
17. Dextrin
18. Glucose
19. Maltose
20. Fructose
21. The following statements about proteins are false except:
22. They give brick-red precipitates with a hot feliling’s solution
23. They hydrolyse to yield glucose units
24. They contain peptide linkages
25. They are not giant molecules
26. Which one of the following is not a symptom of kwarshiokor?
27. Swollen Abdomen
28. Loss of hair colour
29. Bow-leggedness
30. Scaly skin
31. Thin, weak limbs
32. Which of the following is necessary for sugar formation in leaves?
33. Oxygen (ii) Carbon (iv) oxide (iii) Nitrogen (iv) Water (v) Radiant energy (vi) Melanin (vii) Chlorophyll
34. II, IV, V, VII
35. I, II, III, IV
36. I, III, V, VII
37. III, IV, V, VI
38. II, III, IV, VII
39. The major constituents of bones and teeth are:
40. Sodium and sulphur
41. Calcium and Nitrogen
42. Phosphorus and calcium
43. Carbon and iron
44. Which of the following vitamins, if deficient leads to sterility?
45. Vitamin A
46. Vitamin C
47. Vitamin E
48. Vitamin D
49. Vitamin B5
50. Photosynthesis mainly occurs in the ordinary green leaves of a plant. These leaves are called?
51. Scale-leaves
52. Foliage leaves
53. Oblong
54. Ovate

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. A | 1. C | 1. D |
| 1. B | 1. C | 1. C |
| 1. A | 1. C | 1. C |
| 1. B |  |  |

**AGRICULTURE, FOOD SUPPLY, AND POPULATION GROWTH**

1. Which of the following is not a root crop?
2. Carrot
3. Cassava
4. Sweet potato
5. Yam
6. The following are fibre crops except….?
7. Cotton
8. Kapok
9. Jute
10. Cinchona
11. Hemp
12. Which of the following diseases is not caused by fungi?
13. Maize rust
14. Cocoa black pod
15. Rice blast
16. Newcastle disease
17. Which of the following animal disease is not caused by virus?
18. Cattle rinderpest
19. Foot and mouth disease of sheep
20. Poultry coccidosis
21. Rabies
22. The following are rice pests except….?
23. Rodents
24. Weevils
25. Beefles
26. Grasshoppers
27. Which of these is not an example of soil particles
28. Silt
29. Clay
30. Humus
31. Stone or gravel
32. Vinegar is used to pickle all but one?
33. Vegetables
34. Tobacco
35. Meat
36. Fish
37. Developing countries tend to have the following except one?
38. High birth rate
39. Short life spans
40. Low infant mortality rate
41. A high percentage of young people (under 20 years)
42. Food spoilage is mainly due to?
43. Poor quality
44. High protein content
45. Pests
46. Activities of decomposers
47. Excess water
48. Acarides kills which of the pests?
49. Weeds
50. Eelworms
51. Mites
52. Slugs

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. D | 1. D | 1. D |
| 1. C | 1. C | 1. C |
| 1. B | 1. C | 1. C |
| 1. C |  |  |

**BASIC ECOLOGICAL CONCEPTS**

1. A collection or a group of organisms of the same species which occupies a particular space is called?
2. Community
3. Niche
4. Population
5. Habitat
6. The Biosphere includes the following except
7. Atmosphere
8. Lithosphere
9. Hydrosphere
10. Mesosphere
11. The biotic component of an ecosystem consists of the following except:
12. Producers
13. Carnivores
14. Humidity
15. Decomposers
16. The functional unit of ecology is?
17. Niche
18. Environment
19. Ecosystem
20. Community
21. A Tullgren funnel is used in …..?
22. Collecting small Animals
23. Collecting moving insects in the air
24. Comparing the number and types of animals in different soil samples
25. Measuring the population of dead organisms
26. All the following are limiting factors which determines the distribution of forest and savanna in Nigeria except
27. Mean annual rainfall
28. Length of dry season
29. The proportion of sand to clay in the soil
30. Minimum relative humidity in driest months
31. Mangrove swamps are found in the delta region of the following except:
32. Cross River State
33. Rivers
34. Lagos
35. Imo
36. Bendel
37. The following factors affect aquatic habitat except:
38. Salinity
39. Relative Humidity
40. Turbidity
41. Density
42. Which of the following is not true of lateritic soil?
43. Highly leached
44. Lacking in Iron salts
45. Poor in humus
46. Widespread in the Guinea and Sudan Savanna belts
47. A waxed bulb thermometer, tied to a string which is knotted at regular intervals is used to measure the temperature of?
48. The soil
49. The highest and lowest temperature of the day
50. The water at different depths in a pond
51. None of the above

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. C | 1. D | 1. C |
| 1. C | 1. A | 1. C |
| 1. D | 1. B | 1. B |
| 1. C |  |  |

**FUNCTIONING ECOSYSTEM**

1. The carbon cycle involve the following except
2. Respiration
3. Transpiration
4. Decay
5. Photosynthesis
6. Combustion
7. An interlocking form of feeding relationship is called
8. Food chain
9. Nutrition
10. Consumer
11. Food web
12. In the food chain

Grass -------- Zebra --------- Lion ---------

Lion is in which trophic level

1. Trophic level I
2. Trophic level 2
3. Trophic level 3
4. None
5. Trophic level 2 always consists of the following except?
6. Girraffees
7. Ustilago
8. Witchweed
9. Fungi
10. The best way of representing relationships between organisms in the various trophic levels of a food chain is?
11. Pyramid of numbers
12. Pyramid of energy
13. Pyramid of Biomass
14. Pyramid of food
15. Pyramid of biomass represents?
16. The number of organisms of each trophic level
17. The total wet or dry mass of the organisms of each trophic level
18. The flow of energy through each trophic level
19. The total amount of N P P

If NPP = 21,000 kj/m2/yr

3000kj eaten by cow

3500kj eaten by other primary consumers

In cow, 2000 kj lost in urinnne annnd faeces, 800kj lost as head.

200kj stored in New tissues of cow

1. The percentage of consumed energy that is stored by the cow is?
2. 9%
3. 7%
4. 0.1%
5. 2.7%
6. Calculate, the percentage of NPP of grassland that is stored by the cow?
7. 1%
8. 2%
9. 3%
10. 4%
11. In living organisms, nitrogen is found mainly in?
12. Glucose
13. Fats and oils
14. Amino acids
15. Vitamins
16. To show that carbondioxide is absorbed during photosynthesis, potassium hydroxide is used to-?
17. Supply more Co2
18. Remove Co2
19. Supply H2O
20. Remove O2

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. D | 1. C |
| 1. D | 1. B | 1. B |
| 1. B | 1. A | 1. C |
| 1. B |  |  |

**ECOLOGICAL MANAGEMENT**

1. Oil spillage can be controlled by -------
2. Applying biochemical oxygen demand (BOD)
3. By littering rivers with oil
4. By applying detergents
5. By removing the oil with herbicides
6. One of the following is not a terrestrial adaptation?
7. Poorly developed roots
8. Lungs for respiration
9. Presence of sweat gland
10. Possessions of hairs
11. The fumes of motor cars havs in its constituents a very serious pollutant such as:
12. Nitrous oxide
13. Carbon (II) oxide
14. Carbon (iv) oxide
15. Lead oxide
16. Which of the parasitic associations is shortlived?
17. Tsetsefly feeding on human blood
18. Lice in the body of some animals
19. Liver fluke in the body of animals
20. Trypanosome
21. Slight in tomatoes is caused by ---?
22. Babesia
23. Interdigitate
24. Phytophthora infestans
25. Trichophyton vivax
26. Which of the following is not an example of parasitic plant?
27. Witchweed
28. Venus flytrap
29. Mistotle
30. Dodder
31. The worm that is transmitted through the bite of the blackfly, simulium is?
32. Onchocerca
33. Loaloa
34. Wuchereria
35. Ascaris lumbricoides
36. Which of these is false about the microfilariae of onchocerca
37. It is sheathed
38. It is unsheathed
39. When taken up by the vector, they develop into larvae which can re-infect new human hosts.
40. None of the above
41. Which of these is a partial parasite?
42. Tapinanthus lorantus
43. Cuscuta
44. Bitharzia
45. Ascaris suum
46. Which of the following is not a mesophyle?
47. Cassia
48. Hibiscus
49. Cassava
50. Acacia

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. C | 1. A | 1. B |
| 1. A | 1. C | 1. B |
| 1. A | 1. A | 1. A |
| 1. D |  |  |

**HUMANS AND ENVIRONMENT**

**MICRO-ORGANISM, DISEASES**

**CONSERVATION OF NATURAL RESOURCES**

1. The first person to discover micro-organism was?

Louis Pasteur

Van leeuwenhoek

Spallanzani

Petri

Robert Koch

1. Agar is a dried polysaccharide extract of which algae----?
2. Red algae
3. Brown algae
4. Green algae
5. Yellow algae
6. All the following allow for the natural growth of microorganisms except?
7. Air
8. Food
9. Soil
10. Agar
11. The following diseases can be spread through contact except?
12. Scabies
13. Leprosy
14. Syphilis
15. Filariasis
16. Tuberculosis
17. Which of the following diseases is caused by a protozoan?
18. Sleeping sickness
19. Amoebic dysentery
20. Malaria
21. All of the above
22. The vector for Rickettsial is?
23. Dogs
24. Blackfly
25. Lice
26. Housefly
27. All the following are caused by a bacteria except?
28. Cholera
29. Leprosy
30. Tetanus
31. Measles
32. Typhoid
33. Which of the following is not transmitted through sexual intercourse?
34. Neisseria gonorrhoeae
35. Treponema Pallidum
36. Trichomonas vaginalis
37. Human immunodeficiency virus
38. None of the above
39. Which of the following is not a way for conserving soil?
40. Control of soil erosion by water or wind
41. Avoid indiscriminate feeling of trees
42. Avoid overgrazing, over cultivation and over cropping
43. Desertification
44. Which of the following is most likely to promote desert enchroachment
45. Afforestation
46. Overgrazing
47. Irrigation
48. Game reserve

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. A | 1. D |
| 1. D | 1. D | 1. C |
| 1. D | 1. E | 1. D |
| 1. B |  |  |

**CELL**

**LIVING UNIT STRUCTURE**

1. Which of the following is called as the cell respiratory organelle?
2. Ribosomes
3. Lysosomes
4. Ciolgi bodies
5. Mitochondria
6. Which of the following forms the intracellular transporting system?
7. Mitochondria
8. Lysosomes
9. Endoplasmic reticulum
10. Ribosomes
11. The movement of the flagellum is regulated by?
12. Plasma membrane
13. Nucleus
14. Ribosomes
15. Kinetosomes
16. Peroxisomes are found in the cells of?
17. Protozoa
18. Porifera
19. Coelenterate
20. Platyhelminthe
21. The lysosome originates from?
22. Mitochondria
23. Ribosomes
24. Nucleus
25. Golgi apparatus
26. The number of nucleus in matured mammalian erythrocytes is
27. One
28. Many
29. Two
30. Nil
31. Which of the following cell may not contain Golgi apparatus?
32. Epithelial cells
33. Celandular cells
34. RBC
35. Secretary cells
36. Congo red dye can be used to stain?
37. Plant cell
38. Nerve cell
39. Aland cell
40. Yeast cell
41. Lysosomes are involved in ----?
42. Intracellular digestion
43. Extracellular digestion
44. Phagocytosis pinocytosis
45. The cell theory was forwarded by?
46. Embden and Meyer Hoff
47. Schleiden and Schwann
48. T.H Morgan
49. Singer and Nicholson

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. D | 1. C | 1. D |
| 1. A | 1. D | 1. D |
| 1. C | 1. D | 1. A |
| 1. B |  |  |

**CELL AND ITS ENVIRONMENT**

1. When the fluid surrounding the cell is less concentrated than the inside of the cell, the surrounding fluid is said to be ----?
2. Hypertonic
3. Hypotonic
4. Isotonic
5. Hyperxia
6. The osmotic pressure of pure distilled water is?
7. Four
8. Two
9. Zero
10. Infinity
11. Cells carrying out Active transport have the following except?
12. A high cellular respiratory rate
13. Peroxisomes
14. Numerous mitochondria
15. A high concentration of ATP
16. The spread of H25 gas in a living room is by?
17. Diffusion
18. Osmosis
19. Haemolysis
20. Plasmolysis
21. The term pinocytosis is used when …?
22. An Amoeba captures its food
23. A white blood cell engulfs bacteria
24. Grasshopper feeds on grass
25. Liquid materials are taken into the cell
26. If RBC is placed in an isotonic solution…
27. The cell is unaffected
28. The cell shrinks
29. The cell swells up and burts
30. None of the above
31. Which of these is not a definition for osmosis?
32. Osmosis is the movement of water molecules from a region of low osmotic pressure to a region of higher osmotic pressure through a semi-permeable membrane
33. Osmosis is the movement of water molecules from a region of low concentration of solute through a semi-permeable membrane, separating the two solutions until equilibrium is attained.
34. Osmosis is the diffusion of water molecules across a semi-permeable membrane
35. Osmosis is the movement of gaseous or liquid or solid molecules from a region of higher concentration to a lower concentration.
36. Diffusion can be affected by all of the following except:
37. Concentration gradient
38. Size of molecules
39. Temperature
40. State of matter
41. Colour of solution
42. In osmosis, the weaker solution is said to be?
43. Isotonic
44. Hypertonic
45. Hypotonic
46. More voluminous
47. None of the above
48. Which of the following leads to writing?
49. Haemolysis
50. Flaccidity
51. Pinocytosis
52. Phagocytosis

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. C | 1. B |
| 1. A | 1. D | 1. A |
| 1. D | 1. E | 1. C |
| 1. B |  |  |

**PROPERTIES AND FUNCTION OF THE CELL**

1. Which of the following is not a trace element?
2. Copper
3. Zinc
4. Molybdenum
5. Sodium
6. The mode of a sexual reproduction in spirogyra is?
7. Binary fission
8. Fragmentation
9. Sporulation
10. Budding
11. Which of the following is not propagated wusing suckers?
12. Banana
13. Plantain
14. Pineapple
15. Sisal
16. None of the above
17. Response to variation in the direction of the flow of liquids is known as?
18. Aerotaxis
19. Osmotaxis
20. Rheotaxis
21. Chemotaras
22. Response to wounding is known as?
23. Haptotropism
24. Rheotropism
25. Traumotropism
26. Galuanotropism
27. All the following are methods of artificial vegetative propagation except:
28. Cuttings
29. Use of modified leaves
30. Marcotting
31. Grafting
32. Layering
33. Budding is an asexual method of reproduction of?
34. Hydra
35. Yeast
36. Spirogyra
37. A and B
38. Plant shoots are?
39. Positively geotropic
40. Negatively geotropic
41. Negatively Phototropic
42. Positively Hydrotropic
43. Kinesis is the rate of change of a living organism in response to?
44. The direction of the stimulus
45. The intensity of the stimulus
46. The slow movement towards light
47. None of the above
48. The basis of growth involves the following except cell
49. Reduction
50. Division
51. Differentiation
52. Enlargement

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. D | 1. B | 1. E |
| 1. C | 1. C | 1. B |
| 1. D | 1. B | 1. B |
| 1. A |  |  |

**SKELETAL SYSTEM**

1. Which of the following is not a tissue found in plant?
2. Epidermis
3. Phloem
4. Xylem
5. Dermis
6. Which of the following is a function of supporting tissue in plants?
7. Resilience
8. Locomotion
9. Respiratory movement
10. Regeneration of loss parts
11. Which of the following parts in herbaceous plants gives mechanical support to the stem and root in terms of turgidity?
12. Parenchyma
13. Phloem
14. Guard cell
15. Epidermis
16. Which of the following groups of vertebrae have two branches at the end of their transverse process?
17. Sacral
18. Thoracic
19. Cervical
20. Lumbar
21. The xylem elements perform the function of transport but they also help to support plants because they ---?
22. Are internally located
23. Are tabular
24. Have rigid thick walls
25. Constantly absorb water
26. The number of candal vertebrae found in rabbit is?
27. 8
28. 4
29. 6
30. 16
31. 18
32. The ulna projects behind to form the?
33. Olecranon fossa
34. Bicipital groove
35. Glenoid fossa
36. Greater tuberosity
37. Saddle joints exist between the ---?
38. Carpal and metacarpal bones of the wrist and foot
39. Skull
40. Elbow, finger and knee
41. Ball of the humerus
42. The first seven pairs of ribs attached to the sternum are called?
43. Floating ribs
44. True ribs
45. False ribs
46. Tuberculum ribs
47. The part of the upper limb from shoulder to the elbow is the?
48. Forearm
49. Ilium
50. Arm
51. Ischium

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. D | 1. A | 1. A |
| 1. D | 1. D | 1. D |
| 1. A | 1. A | 1. B |
| 1. C |  |  |

**DIGESTIVE SYSTEMS AND FEEDING HABITS**

1. Which of these is not an enzyme?
2. Pepsin
3. Lipase
4. Amylase
5. Lactose
6. If John has just eaten some maize with coconut, where will digestion begin in his alimentary canal?
7. Oesophagus
8. Stomach
9. Small intestine
10. Duodenum
11. Mouth
12. Which of the following substances has the highest amount in joules per unit weight?
13. Carbohydrates
14. Protein
15. Fats
16. Vitamins
17. Which of the organism do not have a complete digestive tract?
18. Bird
19. Goats
20. Hydra
21. Earthworm
22. Which of the following is not an omnivore?
23. Pig
24. Man
25. Domestic fowl
26. Herons
27. Temporary (milk) teeth consists of ---?
28. Four incisors, 3 canines, 2 premolars and 1 molar
29. 3 incisors, 4 canines, 1 premolar and 4 molars
30. 4 incisors, 2 canines, 4 premolars and one molar
31. 4 incisors, 2 canines, 4 premolars
32. 3 incisors, 3 canines, 4 premolars
33. Which of these protect the dentine
34. Enamel
35. Crown
36. Cement
37. Pulp
38. The hardest substance in the body of the mammal is?
39. Crown
40. Femur
41. Enamel
42. Dentine
43. The finger-like outgrowth of the caecum is called?
44. Muscular rectum
45. Ileo-caecal cavity
46. Appendix
47. Anus
48. Enzymes of the succus entericus includes the following except?
49. Erepsin
50. Trypsin
51. Lactose
52. Maltose

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. D | 1. E | 1. C |
| 1. C | 1. D | 1. D |
| 1. A | 1. D | 1. C |
| 1. B |  |  |

**TRANSPORT (CIRCULATORY) SYSTEMS AND MECHANISMS**

1. The inferior mesenteric artery supplies,
2. The kidneys
3. The large intestine and rectum
4. Suprarenal glands
5. Liver
6. The inferior vena cava is formed by the union of the two ---?
7. Commoniliac veins
8. Subclavian veins
9. Auxiliary vein
10. None of the above
11. The outer layer of the pericardium is
12. Serous pericardium
13. Fibrous pericardium
14. Alobular pericardium
15. None
16. The blood vessels carrying blood away from the heart are the
17. Arteries
18. Veins
19. Capillaries
20. Veins
21. Wall of the blood vessels are supplied with blood by?
22. Vasa nervosum
23. Exchange vessels
24. Vasa varosum
25. Capacitance vessels
26. The exchange vessels are:
27. Arteries
28. Venules
29. Arterioles
30. Capillaries
31. Which of these is not a media for transportation in living things?
32. Blood and lymph
33. Cell sap
34. Latex
35. Cytoplasm
36. Cell wall
37. The fluid portion of the blood is the ?
38. RBC
39. WBC
40. Plasma
41. Platelets
42. Which of the nucleus of the white blood cell is kidney or bean shaped
43. Lymphycyte
44. Monocyte
45. Neutrophil
46. Basophil
47. Contraction of the heart or of any chamber is known as?
48. Systole
49. Diastole
50. Vagus
51. Pacemaker

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. A | 1. B |
| 1. A | 1. C | 1. D |
| 1. E | 1. C | 1. B |
| 1. A |  |  |

**RESPIRATORY SYSTEM AND MECHANISM**

1. Which of the following is not a product of fermentation of glucose?
2. Energy
3. Alcohol
4. Carbondioxide
5. Lactic acid
6. During respiration, the incomplete oxidation of glucose to produce pyruvic acid is known as?
7. Kreb’s cycle
8. Aerobic respiration
9. Glycolysis
10. Autolysis
11. Air enters the trachea through the?
12. Pharynx
13. Larynx
14. Epiglottis
15. Bronchioles
16. Acetic acid that enters into the kreb cycle comines with oxaloacetic acid to form ---?
17. Citric acid
18. Ketoglutaric acid
19. Succinic acid
20. Malic acid
21. Animals producing light have two substances in them known as?
22. Lufein and zeaxanthin
23. Flavonvid and fucoxanthin
24. Lucifern and luciferase
25. Phycoerythrin and phycocyania
26. When a mammal respires anaerobically for a long time
27. Pyruvic acid is converted into Acetyl COA
28. More energy is released from fats in the body
29. Lactic acid accumulates in the muscles
30. The Kreb’s cycle is fully completed
31. Which of these in fishes prevent food substances from entering the gills from the pharynx?
32. Gill rakers
33. Gill filaments
34. Gill arch
35. None
36. Which of these is not a characteristic for respiratory surfaces?
37. Moist surface
38. Well ventilated surface
39. Small surface area
40. Permeability
41. The respiratory surface found in Amoeba and paramecium is?
42. Skin
43. Mouth
44. Cell membrane
45. Gills
46. In grasshoppers or cockroaches how many Paris of spiracles are located on the eight abdominal segments?
47. 6
48. 8
49. 10
50. 4
51. 7

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. D | 1. C | 1. B |
| 1. A | 1. C | 1. C |
| 1. A | 1. C | 1. C |
| 1. C |  |  |

**EXCRETORY SYSTEMS AND MECHANISMS**

1. Which of the following is a plant excretory product?
2. Oil
3. Cytokine
4. Resin
5. Amino acid
6. Uric acid is a waste product created during the breakdown of ---?
7. Purines
8. Pyramidine
9. Haemoglobin
10. None of the above
11. Which of the following substances is not found in urine?
12. Water
13. Sodium chloride
14. Nitrogenous compound
15. Calcium chloride
16. Which of these is not a function of the kidney?
17. Production of urine
18. Maintenance of acid-base balance in the body
19. Osmo-regulation
20. Removal of urea
21. Production of bile
22. What blood vessel supplies oxygenated blood to the kidney?
23. Hepatic artery
24. Hepatic vein
25. Hepatic portal vein
26. Renal artery
27. Mesenteric artery
28. Which of the following is not a waste product in plants?
29. Cocaine
30. Turpentine
31. Quinine
32. Carbamide
33. Resins
34. Which of the following is not a byproduct of protein breakdown?
35. Urea
36. Co2
37. Uric acid
38. Ammonia
39. Excretory organ found in shrimp (crustacean) is known as?
40. Flame cell
41. Nephridia
42. Green gland
43. Liver
44. Skin
45. Which of these is not true of transpiration?
46. Occurs in plants only
47. Wind and light affect its rate
48. Brings cooling effect on the leaves or plants
49. Occurs both in the day and night
50. The renal cortex comprises the following except?
51. Proximal tubule
52. Renal corpuscle
53. Collecting tubules
54. Distal tubule

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. C | 1. A | 1. D |
| 1. E | 1. D | 1. D |
| 1. B | 1. C | 1. D |
| 1. C |  |  |

**AQUATIC AND TERRESTIAL HABITATS**

1. An aquatic Habitat that is not moving is?
2. Lotic
3. Lentic
4. Bentic
5. Netic
6. Which of the following is not a type of estuary?
7. Tidal marshes
8. River mouths
9. Embayment
10. Pandanus
11. An adaptation of red mangrove plant is---?
12. Leaves of some plants secrete salts
13. Seeds of mangrove plant can germinate while still attached to its parent plants
14. Soil is water-logged and low in oxygen.
15. All of the above
16. Trees in the mangrove have----?
17. Pneumatophores
18. Gametophytes
19. Sporophytes
20. Oocytes
21. Which of the following is a xeromorphic plant?
22. Cactus
23. Water leaf
24. Water lily
25. Balsam plant
26. Floating plants are referred to as----?
27. Benthos
28. Zooplanktons
29. Phytoplanktons
30. Neretic
31. Browsers are?
32. Eaters of grasses
33. Eaters of leaves and twigs
34. Insects
35. Mammals that lack placenta
36. A lake consists of the following zones except?
37. Littoral zone
38. Limnetic zone
39. Profundal zone
40. Aphotic zone
41. A low and wet land habitat representing a transition between aquatic and terrestrial habitat is?
42. Marsh land
43. Brackish
44. Forest
45. Desert
46. Epiphytes are usually found in?
47. Desert
48. Forest
49. Marsh land
50. Grassland

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. D | 1. D |
| 1. A | 1. A | 1. C |
| 1. B | 1. D | 1. A |
| 1. B |  |  |

**ECOLOGY OF POPULATION**

1. Which of these is not a cause of food shortage?
2. Bush fire
3. Cleistogamy
4. Drought
5. Environmental pollution
6. An example of a permanent family planning method is?
7. Vasectomy
8. Intra-uterine device
9. Diaphragms
10. Condom
11. An example of natural way of controlling human population is?
12. Diseases
13. Earthquake
14. War
15. All of the above
16. A succession that occur on bare surfaces, where no community existed before is?
17. Primary
18. Secondary
19. Tertiary
20. Quaternary
21. The succession that involves the formation of new soil is?
22. Secondary
23. Primary
24. Tertiary
25. None
26. Which of these is a natural method of birth control?
27. Diaphragm
28. Spermicidal
29. Rhythm method
30. Sterilization
31. Natality is?
32. Predation rate
33. Birth rate
34. Death rate
35. Disease infection rate
36. Which of these is not density independent?
37. Competition for food
38. Grass fires
39. Drought
40. Floods
41. Natural birth control methods include the following except?
42. Rhythm method
43. Abstinence
44. Coitus interruption
45. Cap or diaphragm
46. Tubal ligation cuts the ---?
47. Sperm ducts
48. Oviduct
49. Urethrea
50. Vagina

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. A | 1. D |
| 1. A | 1. B | 1. C |
| 1. B | 1. A | 1. D |
| 1. B |  |  |

**REGULATION OF INTERNAL ENVIRONMENT**

1. Which of the following is not a disease of the kidney?
2. Dieresis
3. Glomerular nephritis
4. Oedema
5. Kidney stone
6. The normal P.H of blood is ----?
7. 7.4
8. 8.1
9. 6.0
10. 4.5
11. Aldosterone is a hormone from the ---?
12. Adrenal medulla
13. Thyroid gland
14. Adrenal cortex
15. Thyroid gland
16. The organ that helps in the inactivation of hormones is?
17. Kidney
18. Spleen
19. Lymph
20. Liver
21. Which of the plant hormones bring about or causes parthenocarpy?
22. Cytokinins
23. IAA
24. NAA
25. 2,4 dichlorophenoxy acetic acid
26. Which of the plant hormones probably play a role in abscission?
27. Auxin
28. Gibberellins
29. Abscisii acid
30. Cytokinins
31. Ethylene
32. Which of the following is not part of the arterior pituitary hormones?
33. TSH
34. GH
35. ADH
36. LH
37. FSH
38. Which of these is not a characteristic of a cretin?
39. Physically underdeveloped
40. Sexually immature
41. Sluggishness
42. Mentally retarded
43. Giant in size
44. Which of the hormones lowers the level of calcium ions in blood?
45. Calcitonin
46. Paradomones
47. Alucagon
48. Aldosterone
49. Part of the Dermis in the skin that acts as a long term food store is?
50. Hair follicle
51. Fatty layer
52. Sebaceous gland
53. Sweat gland

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. C | 1. A | 1. C |
| 1. D | 1. C | 1. C |
| 1. C | 1. E | 1. A |
| 1. B |  |  |

**NERVOUS CO-ORDINATION**

1. The scientist that worked on learned behavior is?
2. Dendel
3. Pavlon
4. Morgan
5. Marwin
6. The largest part of the brain is?
7. Cerebrum
8. Cerebellum
9. Medulla oblongata
10. Hypothalamus
11. The part of the brain responsible for smelling is---?
12. Auditory lobe
13. Olfactory lobe
14. Optic lobe
15. Pons varoli
16. The disease of the cerebrospinal canal of the spinal cord is?
17. Dropsy
18. Jaundice
19. Meningitis
20. Tortucolis
21. Each neurone consists of the following structures except?
22. Cell body
23. Dendrites
24. Axon
25. White matter
26. Myelin sheath
27. Between the outermost and innermost membrane of the meninges is a fine, web like tissue called?
28. Arachnoid mater
29. Dura mater
30. Pia mater
31. Ganglion
32. In flamans, how many pairs of cranial nerves arise from the ventral surface of the brain?
33. 10
34. 12
35. 11
36. 9
37. 8
38. The myelin sheath that surrounds an axon is formed by?
39. Node of ranvier
40. Synaptic knob
41. Schwann cells
42. Dendrons
43. Which of these is not an example of instinctive behavior?
44. Movement of earthworm away from light
45. Territorial behavior of a male Agama lizard
46. Not withdrawing the arm when it is pricked
47. Sucking reflex of a newborn baby when a finger is placed in his mouth
48. Reading the verdict of a case by a judge or magistrate is an example of?
49. A reflex action
50. An instinct
51. A conditioned reflex
52. A voluntary action

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. A | 1. B |
| 1. C | 1. D | 1. A |
| 1. B | 1. C | 1. C |
| 1. D |  |  |

**SENSORY RECEPTORS AND ORGANS**

1. The human eye has what type of lens?
2. Crystalline biconcave lens
3. Crystalline biconvex lens
4. Non-crystalline planoconcave
5. Crystalline concavo-convex
6. Which of the following refracts light?
7. Iris
8. Cornea
9. Pupil
10. Forea
11. Optic nerve
12. The swollen base of the semicircular canal is the?—
13. Otholith
14. Ampulla
15. Perilymph
16. Sacculus
17. When the lens and the ciliary muscles loss their elasticity, a disease called--- results
18. Astigmatism
19. Squinting
20. Presbyopia
21. Short-sightedness
22. The eyeballs are attached to the eye sockets by --- muscles
23. Two
24. Three
25. Six
26. One
27. Images are formed on the ---- in the eye
28. Retina
29. Sclera
30. Choroid
31. Conjunctiva
32. Which of the following organisms have simple eyes?
33. Cockroach
34. Spider
35. Grasshopper
36. Mosquito
37. An eye defect where images are formed at the back of the retina is?
38. Hypermyopia
39. Myopia
40. Hypermetropia
41. Conjunctivitis
42. The most refractive part of the eye ball is?
43. Cornea
44. Lens
45. Aqeous humour
46. Vitreous humour
47. The bones of ossicle at the centre is?
48. Anvil
49. Stirrup
50. Malleus
51. Stapes

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. B | 1. B |
| 1. C | 1. C | 1. A |
| 1. B | 1. C | 1. A |
| 1. A |  |  |

**SEXUAL REPRODUCTION:**

**SYSTEM**

1. The two most important events in sexual reproduction are:
2. Mitosis and meiosis
3. Mitosis and fertilization
4. Meiosis and fertilization
5. Encrysting and fertilization
6. In which of the following organisms is fertilization external?
7. Toad
8. Lizard
9. Bird
10. Man
11. The structure that acts as an excretory store in the foetal development is?
12. Choroin
13. Amnion
14. Allantois
15. Yolk sac
16. The specialized leaves which comes from the axils and of which arise flowers is?
17. Bract
18. Corolla
19. Calyx
20. Receptacle
21. In meiosis the number of chromosomes is?
22. Diploid
23. Polydiploid
24. Polyploidy
25. Haploid
26. Which of these is not among the accessory glands?
27. Testicular gland
28. Cowper’s gland
29. Prostate gland
30. Seminar vesicle
31. Testosterone is produced by the--?
32. Sertoli cells
33. Interstitial cells
34. Aerosome
35. Araffian follide
36. The mammalian rat has many uterus?
37. 1
38. 2
39. 3
40. None
41. In female frogs, the urine from the kidneys drains down the ---- into the doaca
42. Vasa efferentia
43. Wolffian ducts
44. Bladder
45. None
46. The number of stamens in a male pawpaw flower is?
47. 5
48. 7
49. 3
50. 10
51. 2

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. C | 1. A | 1. C |
| 1. A | 1. D | 1. A |
| 1. B | 1. B | 1. B |
| 1. D |  |  |

**SEXUAL REPRODUCTIVE BEHAVIOURS**

1. An example of plant that is pollinated by water is?
2. Water leaf
3. Waterlily
4. Hibiscus
5. Crotalia
6. The process by which the male and female gamete mature at the same time is called?
7. Homogamy
8. Dichogamy
9. Cleistogamy
10. Homoandry
11. A flower having both stamen and carpel on the same flower is referred to as---?
12. Bisexual flower
13. Unisexual
14. Cleistogam
15. Homogamy
16. The process by which a male and female animal separate themselves from a group for the purpose of mating is---?
17. Pairing up
18. Courtship
19. Territoriality
20. Migration
21. Anaemophilous flowers are pollinated by?
22. Insects
23. Wind
24. Water
25. Explosive
26. Mechanisms
27. The stalk of the inflorescene is---?
28. Pedicel
29. Receptacle
30. Furnicle
31. Pedunde
32. The poinsettia is pollinated by ---?
33. Wind
34. Insect
35. Water
36. Birds
37. Which of the following organisms does not exhibit courtship behavior?
38. Peacock
39. Agama lizard
40. Toad
41. Amoeba
42. Pigeon
43. Territoriality is a phenomenon among---?
44. Lower organisms
45. Plants of different species
46. Male animals with a group of females
47. Animal and plants
48. Which of the following is not an example of entomophilous flower?
49. Hibiscus
50. Flamboyant
51. Guinea grass
52. Allamanda

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. A | 1. A |
| 1. B | 1. B | 1. A |
| 1. D | 1. D | 1. C |
| 1. C |  |  |

**DEVELOPMENT OF NEW ORGANISM**

1. Ovoviviparity is a process of reproduction used for---?
2. Man
3. Cals
4. Fishes
5. Toad
6. Which of the following animals is viviparous?
7. Bony fish
8. African toad
9. Agama lizard
10. Flying bird
11. Black rat
12. You will know that an egg of a toad has been fertilized, when the egg is---?
13. Slimy to touch
14. Dark all over
15. White at the lower surface
16. Coiled with shell
17. Hard to touch
18. The movement of food from the mother to the foetus is by?
19. Diffusion
20. Osmosis
21. Infusion
22. Conversion
23. The embryo is attached to the placenta by a structure known as---?
24. Umbilical cord
25. Chorion
26. Atlantois
27. Amnion
28. Incomplete metamorphosis occurs in the ---?
29. Bee
30. Mosquito
31. Butterfly
32. Cockroach
33. Housefly
34. The plumule is protected by a sheath called?
35. Coleorhizae
36. Scutellum
37. Coleoptiles
38. Helium
39. About 30 days after fertilization, the eggs of a cockroach hateh into a miniature offspring called?
40. Wriggler
41. Caterpillar
42. Imago
43. Nymph
44. Which of these do not undergo complete metamorphosis?
45. Plant louse or greenfly
46. Housefly
47. Butterfly
48. Wasp
49. Fraternal twins develops rom?
50. Two ova and two sperms
51. One ovum and a sperm
52. Two ova and a sperm
53. None

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. C | 1. E | 1. B |
| 1. A | 1. A | 1. D |
| 1. C | 1. D | 1. A |
| 1. A |  |  |

**FRUITS**

1. The tiny hole, through which air and water enters into the seed during germination is---?
2. Calyx
3. Micropyle
4. Helium
5. Raphae
6. The major food reserve in maize fruit is---?
7. Scutellum
8. Cotyledon
9. Micropyle
10. Endosperm
11. Not all nuts are nuts, an example of a true nut is?
12. Groundnut
13. Cashew nut
14. Coconut
15. Almond
16. Hespieridium are different from berries in that---?
17. Its endocarp is stony
18. Its epicarp is woody
19. The epicard and mesocarp fuse to form the skin or rind
20. Its epicarp is fleshy
21. Castor oil fruit and desmodium are examples of --?
22. Schizocarp
23. Samara
24. Siliqua
25. Caryopsis
26. Which of the following is not a true fruit?
27. Hesperidum
28. Pome
29. Berry
30. Drupe
31. An example of a capsule is?
32. Sodom apple
33. Legume
34. Okro
35. Tridax
36. Which of the following fruits is dispered by an animal?
37. Acanthospermum
38. Urena
39. Boerhavia
40. Balsam
41. A particular fruit has the following characteristics
42. Succulent, edible parts and tough seed coats
43. Attachments such as hooks, sticky hairs and glands on the fruit and seed coats

The mode of dispersal of the fruit is ---

1. Wind
2. Animal
3. Water
4. Explosive mechanism
5. Which of these is not a feature of a seed?
6. Has a scar (helium) formed by attachment of funicle
7. Has a pore (micropyle) in the seed coat
8. Has a pericarp
9. Develops from an ovule

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. B | 1. D | 1. B |
| 1. C | 1. A | 1. B |
| 1. C | 1. D | 1. B |
| 1. C |  |  |

**VARIATION. ADAPTATION. EVOLUTION**

1. Which of these is not a caste of bees?
2. Drones
3. Queen
4. Soldier
5. Workers
6. The dance work in bees is a type of?
7. Communication
8. Protection
9. Defence
10. Temperature regulation
11. Competition between Daphnia pulicaria and Daphnia magna is---?
12. Intraspecific
13. Inter-specific
14. Co-specific
15. Conjoined
16. Which of the blood group lacks antibody
17. A
18. B
19. AB
20. O
21. The ABC systems of blood groups was discovered by ---
22. Dean Larwach
23. Karl Landsteiner
24. Alexandra Stock
25. Bale Dujardin
26. Vivid green and orange patterns of some south American forest frogs is an example of?
27. Counter shading
28. Disruptive colouration
29. Warning colouration
30. Mimicry
31. In the life history of a bee, if a larva is feed on pollen and honey it becomes as?
32. Queen
33. Drone
34. Worker
35. None
36. The dance that indicates that the food source is witin a radium of 90m from the hive is?
37. Round dance
38. Waggle dance
39. Break dance
40. Slide dance
41. The Amino acid present in a sickle cell anaemic patient, that is not found in normal haemoglobin is?
42. Glutamic acid
43. Lysine
44. Alanine
45. Valine
46. Convergent evolution occurs when group of
47. Related organisms become adapted to different environments
48. Related organisms become adapted to similar environments
49. Unrelated organisms become adapted to different environments
50. Unrelated organisms become adapted to similar environment

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. C | 1. A | 1. B |
| 1. C | 1. B | 1. C |
| 1. C | 1. A | 1. D |
| 1. D |  |  |

**GENETICS:**

**THE SCIENCE OF HEREDITY**

1. Y chromosomes is only found in --?
2. Males
3. Females
4. Both
5. None
6. The normal medalian ratio in a dihybrid cross is?
7. 2:1
8. 3:1
9. 7:9, 3:1
10. 9:3: 3:1
11. The probability of producing a child of blood group 0 by parents of blood group o and AB respectively is---?
12. 75%
13. 50%
14. 25%
15. 0%
16. Which of the following organic bases is not found in deoxyribonucleic acid (DNA)
17. Thymine
18. Cytosine
19. Uracil
20. Guanine
21. Which of the following statement about mutation is true?
22. The genotype is not affected
23. The genotype is affected
24. The phenotype is not affected
25. It cannot be induced by artificial means
26. Variation which exhibits a wide range from one extreme to the other with very little difference between the intermediates is described as?
27. Phenotypic
28. Discontinuous
29. Continous
30. Genotypic
31. A person with blood group B can only donate blood to individuals with blood group
32. A and B
33. B and AB
34. O only
35. B only
36. Agglutination will not occur when?
37. Blood group A donate blood to B
38. Blood group B receive blood from A
39. Blood group O donate blood to AB
40. None
41. In Mendel’s experiment, it was discovered that the F1 generation of a cross between a brown cok and a white hen were all brown because the gene for the ----?
42. Brown colour was recessive
43. White colour was dominant
44. Brown colour was dominant
45. White colour did not combine
46. A character which fails to express itself in the first filial generation but emerges in the second is
47. Heterozygote
48. Homozygote
49. Dominant
50. Recessive

**ANSWERS**

|  |  |  |
| --- | --- | --- |
| 1. A | 1. D | 1. D |
| 1. C | 1. B | 1. B |
| 1. B | 1. C | 1. C |
| 1. D |  |  |