Biology Final Exam – Part 1

Part I – Multiple Choice - Choose the correct answer.

1. The basic unit of life is the:
   A. Atom
   B. Molecule
   C. Cell
   D. Tissue
2. The process by which plants make their own food is called:
   A. Respiration
   B. Photosynthesis
   C. Digestion
   D. Fermentation
3. The organelle known as the "powerhouse of the cell" is the:
   A. Nucleus
   B. Ribosome
   C. Mitochondria
   D. Vacuole
4. DNA stands for:
   A. Deoxyribonucleic Acid
   B. Dynamic Nuclear Acid
   C. Double Nitrogen Acid
   D. Deoxygenated Nucleic Acid
5. Which organelle controls the activities of the cell?
   A. Cell membrane
   B. Nucleus
   C. Cytoplasm
   D. Chloroplast
6. Which molecule stores genetic information?
   A. Protein
   B. Lipid
   C. DNA
   D. Carbohydrate
7. What gas do plants take in during photosynthesis?
   A. Oxygen
   B. Carbon dioxide
   C. Nitrogen
   D. Hydrogen
8. The movement of water across a cell membrane is called:
   A. Diffusion
   B. Osmosis
   C. Active transport
   D. Respiration
9. Which kingdom contains organisms that make their own food and have cell walls?
   A. Animalia
   B. Plantae
   C. Fungi
   D. Protista
10. A group of similar cells working together forms a:
    A. Tissue
    B. Organ
    C. System
    D. Organism
11. The process by which cells divide to produce identical cells is:
    A. Meiosis
    B. Mitosis
    C. Fertilization
    D. Mutation
12. Which blood cells fight infection?
    A. Red blood cells
    B. White blood cells
    C. Platelets
    D. Plasma
13. The main pigment used in photosynthesis is:
    A. Chlorophyll
    B. Hemoglobin
    C. Keratin
    D. Insulin
14. The scientific name for humans is:
    A. Homo erectus
    B. Homo sapiens
    C. Homo habilis
    D. Homo neanderthalensis
15. Which macromolecule provides quick energy?
    A. Protein
    B. Carbohydrate
    C. Lipid
    D. Nucleic acid

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16. Which structure controls what enters and leaves the cell?
A. Cell membrane
B. Nucleus
C. Ribosome
D. Golgi apparatus

17. The study of living things is called:
A. Geology
B. Chemistry
C. Biology
D. Ecology

18. Which process releases energy from food?
A. Photosynthesis
B. Cellular respiration
C. Diffusion
D. Osmosis

19. Organisms that break down dead matter are called:
A. Producers
B. Consumers
C. Decomposers
D. Predators

20. An organism that makes its own food is a:
A. Consumer
B. Producer
C. Decomposer
D. Parasite

21. The largest level of organization in ecology is the:
A. Population
B. Ecosystem
C. Biosphere
D. Community

22. Which organ pumps blood through the body?
A. Brain
B. Lungs
C. Heart
D. Liver

23. A change in DNA is called a:
A. Trait
B. Mutation
C. Gene
D. Allele

24. The building blocks of proteins are:
A. Fatty acids
B. Amino acids
C. Glucose
D. Nucleotides

25. Which system removes wastes from the body?
A. Digestive system
B. Circulatory system
C. Excretory system
D. Nervous system

26. Which structure in plant cells stores water?
A. Vacuole
B. Ribosome
C. Mitochondria
D. Golgi body

27. Which level of organization comes after tissue?
A. Cell
B. Organ
C. Organ system
D. Organism

28. Which part of the microscope controls the amount of light?
A. Diaphragm
B. Stage
C. Eyepiece
D. Arm

29. Which process produces sex cells?
A. Mitosis
B. Meiosis
C. Diffusion
D. Respiration

30. Which scientist is known as the “father of genetics”?
A. Charles Darwin
B. Gregor Mendel
C. Louis Pasteur
D. Robert Hooke

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Part II – True or False – Write (T) for True or (F) for False

31. _____ All living organisms are made of cells.
32. _____ Plants perform cellular respiration.
33. _____ DNA is found only in animal cells.
34. _____ Energy flows through ecosystems in food chains.
35. _____ Bacteria are multicellular organisms.
36. _____ Mitosis produces two identical cells.
37. _____ The heart is part of the circulatory system.
38. _____ Chloroplasts are found in plant cells.
39. _____ Proteins are made from amino acids.
40. _____ The biosphere includes all living things on Earth.

Part III – Fill-in-the-blank

41. Growth, reproduction, metabolism, response to stimuli, use energy and are made of cells are all characteristics of _____ _____.
42. The nucleus controls cell activities and stores _____.
43. Plants produce _____ and _____ during photosynthesis?
44. An ecosystem is a community of living organisms interacting with _____ factors.
45. A gene is a segment of DNA that determines a _____.
46. Decomposers break down dead organisms and recycle _____.
47. Mitosis produces _____ body cells while Meiosis produces sex cells with _____ the chromosomes.
48. The stomach, intestines, liver, and esophagus are all organs in the _____ system.
49. Maintaining stable internal conditions in the body is called _____.
50. Enzymes are important in cells because they _____ chemical reactions in cells.

Word Bank

glucose oxygen living things trait
digestive identical half nutrients
homeostasis speed up DNA non-living

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