

# Biology Final Exam - Part 1

## Part I - Multiple Choice - Choose the correct answer.

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

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

## 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.

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## 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