**UNIT-I**

**CELLULAR ORGANIZATION OF LIVING ORGANISM**

* 1. **BIOLOGY AS ONE OF THE FIELD OF SCIENCE**

1. The branch of science that encompasses the classification of organisms are called

A. Evolution B. **Taxonomy**

C. Order D. Differentiation

2. A [single-celled](https://en.wikipedia.org/wiki/Unicellular) [organism](https://en.wikipedia.org/wiki/Organism) that lacks a [membrane](https://en.wikipedia.org/wiki/Biological_membrane)-bound [nucleus](https://en.wikipedia.org/wiki/Cell_nucleus)

A. Eukaryotes **B. Prokaryotes**

C. Both a&b C. All of the above

3. Any [organism](https://en.wikipedia.org/wiki/Organism) whose [cells](https://en.wikipedia.org/wiki/Cell_%28biology%29) contain a [nucleus](https://en.wikipedia.org/wiki/Cell_nucleus) and other [organelles](https://en.wikipedia.org/wiki/Organelles) enclosed within [membranes](https://en.wikipedia.org/wiki/Biological_membrane)

**A. Eukaryotes**  B. Prokaryotes

C. Both a&b C. All of the above

4. Give an example of animalia

1. Fishes B. Human beings

C.Reptiles **D. All of the above**

5. Which one is acquire food from their surroundings?

1. **Fungi** B. Monira

C.Protista D.Plantea

* 1. **CELL: BASIC UNIT OF LIFE**

6. The fundamental unit of life is the \_\_\_\_\_\_.

A.Tissue B.Organ

C. System **D. Cell**

7. How the multi cellular organism are developed

**A.Cell🡺Tissue🡺Organ🡺System🡺Organism**

B. Tissue 🡺Cell🡺Organ🡺System🡺Organism

C. Tissue🡺 System🡺Organism🡺Cell

D.Organism🡺Tissue🡺system🡺Cell

8. Which protein present in hair and nail cell

A.Fibrin B. Collagen

**C. Keratin** D. Myosin

9. Extra chromosomal DNA elements in prokaryotic cell

**A. plasmid**  B. Bacteria

C. chromatin D. virus

10. The information center of the cell is the \_\_\_\_\_\_

A. nucleoli **B. Nucleus**

C. Lysosomes D. Mitochondria

* 1. **CELL STRUCTURE AND FUNCTION**

11. Sub cellular structure in a cell \_\_\_\_\_\_

A. Tissue **B. Organelles**

C. Nucleus D. Cell membrane

12. Cell membrane are made up of

**A. Dense protein & Phospholipids**  B. Collagen

C. Glycosaminoglycon D. Actin &Myosin

13. Which model explains the dynamic nature of the proteins in the cell membrane?

A. Lattice model B. Unit membrane

**C. Fluid mosaic** D. Bi molecular

14. Store house of genetic material in the nucleus\_\_\_\_\_\_\_\_\_

**A. Chromosomes**  B. Nucleolus

C. Nucleoid D. Chromatin

15. Organelle playing an active part in cell division is called as

**A. centrioles**  B.chromatin

C.Nucleoli D.Mitochondrion

16. Which part present in mitochondria?

A. Vacuoles **B. Cristae**

C. Cisternae D. Sacs

17. A [protein](https://en.wikipedia.org/wiki/Protein) that assist the assembly or disassembly of other macromolecular structures are called\_\_\_\_\_\_\_\_

**A. Chaperone**  B. Ion channel

C. Hormones D. Enzyme

18. The larger and smaller subunit of 70S ribosome is\_\_\_\_

A.20S and 30S B. 30s and 40S

**C. 50S and 30S** D. 40s and 20s

19. Other names of Lysosomes

**A. Suicidal bag** B. Power house

C. protein factory D. Store house

20. Cell wall made up of\_\_\_\_\_\_\_

**A. Polysaccharide & Peptidoglycon**  B. Lipids & Glucose

C. Starch & Keratin D.Fibrin & Cholesterol

* 1. **GENETIC INFORMATION AND PROTEIN SYNTHESIS**

21. Composition of nucleic acid

**A. Nitrogenous base + Sugar + Phosphoric acid**

B. Sugar + Amino acid + Glycerol

C. Tenpins + Glucose + pentose

D. Aldehyde + Glucose + Pentose

22. Examples of pyrimidine

A. Cytosine B. Thymine

C. Uracil  **D. All of the above**

23. Instead of thymine which pyrimidine base present in RNA

A. Cytosine B. Adenine

**C. Uracil** D. All of the above

24. Which group responsible for negative charge in nucleic acid?

**A. Phospate group** B. Nitrogen

C. Alcohol d. Aldehyde

25. Sugar molecule in nucleic acid are categorized as\_\_\_\_\_\_\_\_\_\_\_

A. Hexose B. Tetrose

**C. Pentose** D. Diose

* 1. **PROTIEN STRUCTURE**

26. Which bond are major contribution to protein stability

A. Covalent bond **B. Vander Waals interaction**

C. Ionic bond D. Hydrogen bond

27. The primary structure of protein is called\_\_\_\_\_\_\_\_\_

**A. Polypeptide chain** B. Three dimensional chains

C. linear chain D. Folding chain

28. The chief function of Disulphide Bridge in the protein structure\_\_\_\_\_\_\_\_\_

A. Folding **B. Mechanical stability**

C. Denaturation D. Bond cleavage

29. Example of tetrameric protein

**A. Haemoglobin**  B. Myoglobin

C. Elastin D. Keratin

30. Which of the following protein having dynamic function?

A. Hormone B. Immunoglobulin

C. Membrane receptor **D. All of the above**

* 1. **CELL METABOLISM**

31. What is the meaning of “Trophs”

**A. Nourishment** B. Energy

C. Absorption D. Digestion

32. An organism capable of synthesizing its own food from inorganic substances using light or chemical energy.

A. Heterotrophs B. Chemotrophs

**C. Autotrophs** D. Lithotrophs

33. Set of metabolic pathways that construct molecules from smaller units are called

A. Catabolism **B. Anabolism**

C. Amphibolism D. None of the above

34. Which process is responsible for ATP molecule energy release?

**A. Phophoryl group transfer** B. Oxidation

C. Reduction D. Conjugation

35. Which micro molecule having amphipathic nature

A. Glucose B. Fatty acid

**C. Amino acid**  D. Nitrogenous base

36. Fatty acid derivatives serves as\_\_\_\_\_\_\_\_\_\_\_\_

**A. Sex hormones** B. Enzymes

C. Carrier D. blood clotting factor

37. Fatty acid having at least one double bond in their structure is called\_\_\_\_\_\_\_

A. Saturated Fatty acid **B. Unsaturated Fatty acid**

C. Supersaturated Fatty acid D. All of the above

38. Which process to means “splitting of Sweet”

**A. Glycolysis**  B. Gluconeogenesis

C. Glycogenesis D. Glycogenolysis

39. Other names of TCA cycle.

A. Citric acid cycle B. Kreb’s cycle

**C. Both a& b**  d. Rhodopsin cycle

40. Electron transport chain takes place in\_\_\_\_\_\_\_\_\_\_\_

**A. Mitochondria** B. Cytoplasm

C. Lysosme D. Ribosome

* 1. **HOMEOSTASIS:**

41. Which of the following statements best describes homeostasis?

1. Keeping the body in a fixed and unaltered state.
2. Dynamic equilibrium.
3. **Maintaining a near-constant internal environment.**
4. Altering the external environment to accommodate the body's needs.

42. A molecule that receives and responds to a neurotransmitter or other substance

**A. Receptor** B. Effector

C. Control centre D. Target centre

43. Which hormone to regulate blood calcium level?

A. TSH B. SH

**C. PTH** D. ADH

44. A section of the brain responsible for the production of hormones, chemical substances that help control different cells and organs is called

A. Pituitary gland B**. Hypothalamus**

C. pineal gland D. Cerebrum

45. Which nervous system brings about fight or flight reactions

**A. Sympathetic nervous system**

B. para sympathetic nervous system

C. Autonomic nervous system

D. central nervous system

**1.8 CELL GROWTH AND REPRODUCTION:**

46. Cell division cannot be stopped in which phase of the cell cycle?

A.G1-phase B.G2-phase

**C.S-Phase**  D.Prophase

47. The non-sister chromatids twist around and exchange segments with each other during

A. Leptotene B. Diakinesis

C. Diplotene  **D. Pachytene**

48. Synapsis occurs between

A. mRNA and ribosomes B. A male and a female gamete

**C. Two homologous chromosomes** D. Spindle fibres and centromere

49. Cells in G0 phase of cell cycle

A. Exit cell cycle B. Enter cell cycle

**C. Suspend cell cycle** D. Terminate cell cycle

50. Arrange the following events of meiosis in the correct sequence:

I. Terminalization

II. Crossing over

III. Synapsis

IV. Disjunction of genomes

The correct sequences :

A. II, I, IV, III **B. III, II, I, IV**

C. IV, III, II, I D .I, IV, III, II

51. Each individual zone of a chromosome replicates as a discrete section called

A. Telomere B. Euchromatin

C. Okazaki fragment  **D. Replication unit**

52. During which phase of the cell cycle does growth occur?

**A. Interphase** B. Anaphase

C. Cytokinesis D. Telophase

53. Which of the following is not a unique feature of meiosis?

A. Synapsis **B. Homologous recombination**

C. Reduction division D. Diakinesis

54. Crossing-over can occur between homologues during

A. zygotene B. pachytene

**C. leptotene** D. diplotene

55. Chiasmata formation and crossing over occur during:

A. prophase of mitosis. **B. prophase I of meiosis.**

C. prophase II of meiosis D. a, b, and c.

**1.9 CELL DIFFERENTIATION:**

56. The development of the dorsal nerve cord in chordates\_\_\_\_\_\_\_

**A. Neurulation**  B. Determination

C. Gastrulation D. Differentiation

57. The zygote stage which is capable of implantation is known as the:

**A. Blastocyst**  B. Inner cell mass

C. Trophoectoderm D. Pronucleus

58. Cells that differentiate into only one type of cell are described as \_\_\_\_\_\_\_\_\_\_.

A. Pluripotent B. Totipotent

**C. Unipotent**  D. Multipotent

59. A fertilized egg can develop into all the types of cells in the body and is therefore considered to be \_\_\_\_\_\_\_\_\_\_.

A. Pluripotent **B. Totipotent**

C. Unipotent D. Multipotent

60. The hormone responsible for “Fight and Flight” response is

**A. Adrenalin**  B. oxytocin

C. ADH D. Insulin