SUDITI GLOBAL ACADEMY, MAINPURI (U.P)

SAMPLE PAPER SESSION-2021-2022

Time - 90min. **Class-11th** **Subject-Biology** **MM-35**

General instructions:

1.*The question paper contains three sections.*

2.*Section A has 24 questions, attempt any 20 questions.*

3.*Section B has 24 questions, attempt any 20 questions.*

4.*Section C has 12 questions, attempt any 10 questions*

5.*Each question Carry 0.7 Mark.*

SECTION-A

[Section – A consists of 24 questions. Attempt any 20 questions from this section. The first attempted 20 questions would be evaluated.]

1. A group of plants and animals with similar traits of any rank is

(A) Taxon (B) Species (C) Genus (D) Order

2. Which is less general in characters as compared to genus

(A) Family(B) Division (C) Class (D) Species

3. What is the correct sequence?

(A) Genus-species-order-kingdom (B) Species-order-phylum-kingdom

(C) Species-genus-order-phylum (D) Kingdom-phylum-class-order

4. Metabolism refers to

(A) Release of energy (B) Gain of energy

(C) Catabolism (D) Gain or release of energy

5. What is nomenclature?

(A) Genus's name written after species

(B) Genus and species names are written in italics

(C) Genus and species have the same name

(D) The first letter of genus and species name is capital

6. The term phylum was coined by

(A) Linnaeus (B) Cuvier (C) Haeckel (D) Theophrastus

7. Binomial nomenclature was given by

(A) Linnaeus (B) Hugo De Vries (C) John Ray (D) Huxley

8. Species found in different geographical locations are called

(A) Sympatric species (B) Allopatric species

(C) Sibling species (D) Morpho species

9. What is a homonym?

(A) Identical name of two different taxa

(B) Two or more names of same taxon

(C) Name given to taxon in local language

(D) Species name repeats the generic name

10. The biologically cohesive unit of taxa is

(A) Phylum (B) Order (C) Genus (D) Species

11. Assertion: The living state is equilibrium steady state to be able to perform work.
Reason: Living process is a constant effort to prevent falling into non-equilibrium.

(A) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(B) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(C) If Assertion is true but Reason is false.
(D) If both Assertion and Reason are false.

12.Assertion: Human diet should compulsorily contain glycine, serine and tyrosine.
Reason: Essential amino acids cannot be synthesized in the human body.

(A) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(B) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(C) If Assertion is true but Reason is false.
(D) If both Assertion and Reason are false.

13. Energy flow and energy transformation in a living system follow

(A) Biogenetic law (B) Law of thermodynamics

(C) Law of limiting factor (D) Liebig's law of minimum

14. Energy transformation is never 100% efficient because of

(A) Catabolism (B) Entropy (C) Homeostasis (D) Anabolism

15. The defining characteristic of living beings is

(A) They reproduce (B) They can digest their food

(C) They respond to external stimuli (D) They regenerate

16. Which of the following organisms can be found in extreme saline conditions?

(A) Eubacteria (B) Archaebacteria

(C) Cyanobacteria (D) Mycobacteria

17. Linnaeus used which kingdom of classification?

(A) Artificial system (B) Natural system

(C) Phylogenetic system (D) Asexual system

18. Smallest taxon of classification is _____.

(A) Kingdom (B) Family (C) Variety (D) Species

19. In which of the following kingdom are Archaea and Nitrogen-fixing organisms classified?

(A) Animalia (B) Plantae (C) Monera (D) Fungi

20. Bentham and Hooker gave which system of classification?

(A) Numerical (B) Phylogenetic (C) Artificial (D) Natural

21. What is the main basis of classification in the five-kingdom system?

(A) Structure of the nucleus (B) Structure of cell wall

(C) Asexual Reproduction (D) Mode of Nutrition

22. Which of the following statements is false about the fungi?

(A) They are eukaryotes (B) They are heterotrophs

(C) They possess a purely cellulosic cell wall (D) None of the above

23. Linnaeus evolved a system of nomenclature called _____.

(A) Vernacular (B) Monomial (C) Polynomial (D) Binomial

24. What is taxon?

(A) A group of related families (B) A type of living organisms

(C) A group of related species (D) A group of any ranking

SECTION-B

[Section - B consists of 24 questions (Sl. No.25 to 48). Attempt any 20 questions from this section. The first attempted 20 questions would be evaluated.]

25. The protists have which of the following?

(A) Free nucleic acid aggregates

(B) Nucleoprotein in direct contact with the rest of the cell substance

(C) Membrane-bound nucleoproteins within the cytoplasm

(D) Nucleoproteins condensed together in a loose mass

26. Genes of Tobacco Mosaic Virus are _____.

(A) Double-stranded RNA (B) Single-stranded RNA (C) Double-stranded DNA (D) Proteinaceous

27. Blue-green algae belong to which group?

(A) Protista (B) Prokaryotes (C) Fungi (D) Bryophytes

28. T.O. Diener discovered _____.

(A) Bacteriophages (B) Infectious proteins (C) Free infectious DNA (D) Free infectious RNA

29.The cytoplasmic connections from cell to cell are known as
(A) middle lamella (B) plasmodesmata

(C) cell membrane system (D) endoplasmic reticulum

30.Bacterial flagella is made up of
(A) tubulin (B) flagellin (C) chitin (D) None of these

31.Plasmolysis occurs due to-
(A) Absorption (B) Endosmosis (C) Osmosis (D) Exosmosis

32.The term Cell was given by-
(A) Leeuwenhoek (B) Robert Hooke (C) Fleming (D) Robert Brown

33.Plasma membrane is
(A) impermeable (B) Semi-permeable

(C) completely permeable (D) Differentially permeable

34.Middle lamella is made up of _____.
(A) calcium sulphide (B) calcium pectate (C) calcium carbonate (D) calcium chloride

35.Match the columns.
1. Cytoskeleton – A. hair-like outgrowth
2. Flagella – B. proximal region of centriole
3. Hub – C. bristle-like structures
4. Fimbriae – D. filamentous protein structure
(A) 1-D, 2-A, 3-B, 4-C (B) 1-D, 2-C, 3-B, 4-A
(C) 1-B, 2-D, 3-A, 4-C (D) 1-D, 2-A, 3-C, 4-B

36.Which of the following does not have cell wall?
(A) Mycoplasma (B) Bacteria (C) PPLO (D) Blue green algae

37.Centrosome is found in-
(A) Cytoplasm (B) Nucleus (C) Chromosomes (D) Nucleolus

38.The longest cell in human body is
(A) red blood cells (B) white blood cells
(C) columnar epithelial cells (D) nerve cells

39.The main site for synthesis of lipids is
(A) vacuoles (B) RER (C) SER (D) Golgi body

40.The function of ribosomes is
(A) metabolism (B) lipid synthesis (C) protein synthesis (D) photosynthesis

41.Which is called Suicidal Bag?
(A) Centrosome (B) Lysosome (C)Mesosome (D) Chromosome

42.A nucleosome is a portion of the chromonema containing _____.
(A) both DNA and histones (B) only histones
(C) both DNA and RNA (D) only DNA

43.The largest cell in the human body is-
(A) Nerve cell (B) Muscle cell (C) Liver cell (D) Kidney cell

44.Keeping in view the fluid mosaic model for the structure of cell membrane, which one of the following statements is correct with respect to the movement of lipids and proteins from one lipid monolayer to the other (described as flip-flop movement)?
(A) Neither lipids, nor proteins can flip-flop
(B) Both lipids and proteins can flip-flop
(C) While lipids can rarely flip-flop, proteins cannot
(D) While proteins can flip-flop, lipids can not

45.Cell secretion is done by-
(A) Plastids (B) ER (C) Golgi apparatus (D) Nucleolus

46.Which one of the following is wrongly matched?
(A) Enzyme – Lipopolysaccharide (B) Phospholipid – Plasma membrane
(C) ATP – Nucleotide derivative (D) Antibody – Glycoprotein

47. A functional protein is
(A) Collagen (B) Ossein (C) Vitamin (D) Enzyme

SECTION-C

[Section- C consists of one case followed by 6 questions linked to this case (Q.No.49 to 54). Besides this, 6 more questions are given. Attempt any 10 questions in this section. The first attempted 10 questions would be evaluated.]

48.Nitrogenous bases present in DNA
(A) Adenine, guanine, cytosine, uracil (B) Adenine, guanine, cytosine, thymine
(C) Adenine, thymine, uracil (D) Guanine, uracil

49.Metabolic intermediates found in living system which are essential for growth and life is called_____
(A) Saponin-A (B) Tannins (C) Secondary metabolite (D) Primary metabolites

50.DNA differs from RNA in having
(A) Thymine but no uracil (B) Uracil but no thymine
(C) Thymine but no cytosine (D) Cytosine but no guanine

51. Enormous diversity of protein molecules is due to
(A) R groups of amino acids (B) Sequence of amino acids
(C) Peptide bonds (D) Amino groups of amino acids

52. Anti-parallel strands of a DNA molecule mean that
(A) One strand turns anticlockwise
(B) Phosphate groups at the start of two DNA strands (poles) are in opposite position
(C) Phosphate groups of two DNA strands at their ends share the same position
(D) One strand turns clockwise

53. The introduction of t-DNA into plants involves:
(A) Altering the pH of the soil, then heat shocking the plants
(B) Exposing the plants to the cold for a brief period
(C) Allowing the plant roots to stand in water
(D) Infection of the plant by Agrobacterium tumefaciens

54. Double hydrogen bond occurs in DNA between
(A) Adenine and guanine (B) Thymine and cytosine
(C) Adenine and thymine (D) Uracil and thymine

55. The most common monomer of carbohydrates is
(A) Sucrose (B) Fructose (C) Maltose (D) Glucose

56. Proteins perform many physiological functions. For example, some function as enzymes. Which one of the following represents an additional function which some proteins discharge?
(A) Antibiotics (B) Pigments making colours of flowers
(C) Hormones (D) Pigments conferring colour to skin

57. Nitrogen is a component of
(A) Carbohydrates (B) Lipids (C) Proteins (D) Polyphosphates

58. The most abundant mineral of the animal body is
(A) Potassium (B) Sodium (C) Calcium (D) Iron

59. The bacterial cell wall is formed of
(A) Cellulose (B) Hemicellulose (C) Peptidoglycan (D) Glycogen

60. Ester linkages occur in
(A) Proteins (B) Lipids (C) Nucleic acids (D) Carbohydrates

Answers Key

1-A	**9-A**	**17-A**	**25-C**	**33-A**	**41-B**	**49-D**	**57-C**
2-D	**10-D**	**18-D**	**26-B**	**34-B**	**42-A**	**50-A**	**58-C**

3-D	**11-C**	**19-C**	**27-B**	**35-A**	**43-A**	**51-B**	**59-C**
4-D	**12-A**	**20-B**	**28-D**	**36-A**	**44-C**	**52-B**	**60-C**
5-B	**13-B**	**21-B**	**29-B**	**37-A**	**45-C**	**53-D**	
6-C	**14-B**	**22-A**	**30-B**	**38-D**	**46-A**	**54-C**	
7-A	**15-C**	**23-D**	**31-D**	**39-C**	**47-D**	**55-D**	
8-B	**16-B**	**24-D**	**32-B**	**40-C**	**48-B**	**56-C**	

Syllabus for Unit Test-1

Chapter-1 The living World

Chapter-2 Biological Classification

Chapter-8 Cell- The Unit of Life

Chapter-9 Biomolecules

Chapter-10 Cell Cycle and Cell Division

Chapter-17 Breathing and Exchange of Gases