

RAMAKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE, RAHARA, KOLKATA
Undergraduate Admission Test: Zoology Honours

Full Marks : 75

Time : 1 hour

1. International Day of Biodiversity is
 - a) 22nd June
 - b) 22nd August
 - c) 22nd May
 - d) 22nd January
2. Electron Transport Chain in bacteria usually present on
 - a) Mitochondria
 - b) Bacterial DNA
 - c) Ribosome
 - d) Plasma membrane
3. Which of the following apply to intercellular junctions?
 - a) The three major adhesive junctions of animal cells are adherens junctions, desmosomes and hemidesmosomes.
 - b) Desmosomes and hemidesmosomes connect epithelial cells to their basement membrane and adjacent cells respectively.
 - c) Gap junctions and plasmodesmata are homologous structures.
 - d) The junctional complexes of gastrointestinal enterocytes ensure that nutrients are only absorbed through the spaces between the cells, which prevents them absorbing potentially harmful substances.
4. The circulation of a two-month-old breast-fed baby will contain maternal:
 - a) IgA
 - b) IgM
 - c) IgE
 - d) IgG
5. A piece of double stranded DNA has 30% A, what will be the% of G?
 - a) 30%
 - b) 40%
 - c) 20%
 - d) 70%
6. Coprophagous habit is noticed in
 - a) Rodents
 - b) Ruminants
 - c) Carnivores
 - d) Insectivores

7. Human blood has an osmolarity of 300 mOsm/L but the kidney excrete hyperosmotic urine with an osmolarity of 1200 m Osm/L. This is achieved by -
- a) Active transport of solutes against concentration gradient
 - b) Passive absorption of water by Henle's loop .
 - c) Both the phenomena are required.
 - d) None of the above
8. Polysaccharides are macromolecule, polymers with many monosaccharides joined by -
- a) Glycosidic linkage
 - b) Peptide bond
 - c) Ester linkage
 - d) Phosphodiester bond
9. Nerve impulse moves faster in the
- a) Nonmyelinated nerve fibre
 - b) Myelinated nerve fibre
 - c) Only through the mixed nerve
 - d) Motor nerve
10. Transcription in eukaryotic cells occurs in the
- a) Cytoplasm
 - b) Nucleus
 - c) Ribosome
 - d) Endoplasmic reticulum
11. The polymerase chain reaction (PCR) is used to
- a) Amplify DNA sequences
 - b) Cut DNA at specific sequences
 - c) Insert DNA into plasmids
 - d) Synthesize RNA from a DNA template
12. Which enzyme is used to join DNA fragments together?
- a) DNA polymerase
 - b) Restriction enzyme
 - c) Ligase
 - d) Helicase
13. The Hardy-Weinberg equilibrium is an important concept in population genetics because:
- a) It describes the role of mutation in evolution
 - b) It provides a suitable model for studying genetic changes
 - c) It explains how populations evolve over time
 - d) It measures the rate of genetic drift in populations

- 14.** A technique used to detect specific mutations in DNA is:
- a) Gel electrophoresis
 - b) PCR (Polymerase Chain Reaction)
 - c) Western blotting
 - d) ELISA (Enzyme-Linked Immunosorbent Assay)
- 15.** Mutations that occur in somatic cells can:
- a) Be passed on to offspring
 - b) Always be repaired by the cell
 - c) Be beneficial to the next generation
 - d) Lead to cancer
- 16.** Which among the following is found only in prokaryotes
- a) Mitochondria
 - b) Ribosome
 - c) Cell wall
 - d) Plasmid
- 17.** Nissl granules present in
- a) Neutrophils
 - b) Neurons
 - c) Nephrons
 - d) None of the above
- 18.** The source of evolutionary variations is
- a) Natural selection
 - b) Mutations
 - c) Recombination
 - d) None of the above
- 19.** The internal skeleton of cell is composed of
- a) Microtubules, intermediate filaments, microfilaments,
 - b) Celulose, intermediate filaments,
 - c) Celulose, microtubule, centrioles
 - d) Microfilaments
- 20.** Which of the following process produce ATP?
- a) Replication
 - b) Transformation
 - c) Oxidative phosphorylation
 - d) None of the above
- 21.** Division of labour or polymorphism in animals can be found in-
- a) Cnidarians
 - b) Mammals
 - c) Echinoderms

- d) All of the above
- 22.** An intermediate step between asexual and sexual reproduction is-
- a) Hermaphroditism
 - b) Conjugation
 - c) Binary fission
 - d) All of the above
- 23.** Centre for heat, touch, cold and pressure are in the-
- a) Frontal lobe
 - b) Parietal lobe
 - c) Occipital lobe
 - d) Temporal lobe
- 24.** Which of the following scientist's name is uttered with the discovery of Oral Rehydration Solution (ORS)?
- a) Dilip Mahalanabis
 - b) Lalji Singh
 - c) Jagadish Chandra Bose
 - d) Subhas Mukherjee
- 25.** Emotions and physical stress are managed by hormones secreted from-
- a) Gonads
 - b) Pituitary
 - c) Adrenal
 - d) Thyroid