



## **Entry Test Sample for BS Biotechnology Programme**

**Total Question: 30**

**Total Marks: 30**

**Time Allowed: 30 min**

**Note: Please click the correct answer from the given choices**

1. The first animal cloned successfully was \_\_\_\_\_.
  - a) Bat
  - b) Cow
  - c) Rat
  - d) **Sheep**
  
2. Thread like structures that appear inside the nucleus at the time of cell division are \_\_\_\_\_.
  - a) Ribosomes
  - b) Cytoskeleton
  - c) **Chromosomes**
  - d) Chromatin
  
3. The very specific sites in DNA duplex, which are recognized and cut by restriction enzymes are\_\_\_\_\_.
  - a) Repeat sequences
  - b) Conserved sequences
  - c) **Palindromic sequences**
  - d) Special sequences

4. RFLP is known as \_\_\_\_\_.
- a) **Restriction Fragment Length Polymorphism.**
  - b) Restriction Fragment Local Polymorphism.
  - c) Required Fragment Length Polymorphism.
  - d) Retrieved Fragment Local Polymorphism.
5. The function of cristae in a mitochondrion is \_\_\_\_\_.
- a) **Electron transport and ATP synthesis**
  - b) Protein synthesis
  - c) RNA formation
  - d) Production of gases
6. The nucleus of a prokaryotic cell is represented by \_\_\_\_\_.
- a) A single stranded simple DNA.
  - b) A double stranded complex DNA.
  - c) A membrane bounded nucleus.
  - d) **A double stranded circular DNA.**
7. Thylakoids are present in \_\_\_\_\_.
- a) **Chloroplast**
  - b) Endoplasmic Reticulum
  - c) Mitochondrion
  - d) Cristae
8. Intake of liquid food by formation of food vacuoles is called \_\_\_\_\_.
- a) **Pinocytosis**
  - b) Phagocytosis
  - c) Absorption
  - d) Assimilation

9. Function of Golgi bodies is\_\_\_\_\_.

- a) **Transport of protein**
- b) Formation of a cell
- c) Breakdown of a lipid
- d) Storage of Enzymes

10. The function of DNA helicases is to\_\_\_\_\_.

- a) Join the DNA strands.
- b) Breakdown the DNA strands.
- c) **Unwind the DNA strands.**
- d) Synthesize the DNA strands.

11. The transfer of genetic material from one cell to another for altering the genetic makeup of the recipient cell is called?

- a) Transduction
- b) **Transformation**
- c) Conjugation
- d) Translation

12. In which phase of the cell cycle, there is extensive metabolic activity and DNA base units are organized for DNA synthesis?

- a) G2 Phase
- b) **G1 Phase**
- c) G0 Phase
- d) S Phase

13. Bacterial cells take up recombinant plasmids, especially when they are treated with\_\_\_\_\_.

- a) **Calcium Chloride**
- b) Boric Acid

- c) Potassium Chromate
- d) Silver Chloride

14. Which of the following plays a part in detoxifying harmful drugs?

- a) Golgi Apparatus
- b) Cytoskeleton
- c) Rough Endoplasmic Reticulum
- d) Smooth Endoplasmic Reticulum

15. Lysosomes that eat parts of their own cells are called?

- a) Primary Lysosomes
- b) Secondary Lysosomes
- c) Autophagosomes
- d) Autolysosomes

16. In the case of human cell, average cell cycle is about:

- a) 24 hours
- b) 26 hours
- c) 28 hours
- d) 30h

17. Which one of the following is the best description of ATP:

- a) A specialized RNA nucleotide with a purine base
- b) A specialized DNA nucleotide with a purine base
- c) A specialized RNA nucleotide with a pyrimidine base
- d) A specialized DNA nucleotide with a pyrimidine base

18. \_\_\_\_\_ is used as a vector or carrier molecule.

- a) Plasmid
- b) DNA
- c) Virus

d) Enzyme

19. Particular tRNA molecules become attached to specific amino acids through the action of an activating enzyme called?

- a) Aminoacyl-tRNA phosphatase
- b) **Aminoacyl-tRNA synthetase**
- c) Aminoacyl-tRNA lipase
- d) Aminoacyl-tRNA peroxidase

20. Which of the following reduces the fluidity of plasma membrane of eukaryotes?

- a) Proteins
- b) Glycoproteins
- c) Glycolipids
- d) **Cholesterol**

21. Metals have the tendency to lose\_\_\_\_\_.

- a) Positrons
- b) Protons
- c) Neutrons
- d) **Electrons**

22. \_\_\_\_\_ is the process in which atomic orbitals having different energy and shape combine to make equal number of hybridized orbitals having same shape and energy.

- a) Bonding
- b) Affinity
- c) Ionization Energy
- d) **Hybridization**

23. Which property of the isotopes of an element can be measured accurately using a mass spectrometer?

- a) **Exact Masses**

- b) Atomic Number
- c) Radioactivity
- d) Ionization Energy

24. Which of following law states that the volume of the given mass of a gas is directly proportional to the absolute temperature when the pressure is kept constant?

- a) Boyle's Law
- b) Charles's Law
- c) Avogadro's Law
- d) Dalton's Law

25. The repetition of faces, angles or edges when a crystal is rotated by 360 degrees along its axis is called?

- a) Isomorphism
- b) Symmetry
- c) Anisotropy
- d) Allotropy

26. When benzene is burnt in free supply of air, it is completely oxidized to which of the following compounds?

- a) Water and Carbon monoxide
- b) Carbon monoxide and Carbon dioxide
- c) Water and Carbon dioxide
- d) Carbon monoxide only

27. Cobalt is a part of \_\_\_\_\_

- a) Vitamin A
- b) Vitamin C
- c) Vitamin k
- d) Vitamin B<sub>12</sub>

28. When one volume of concentrated nitric acid is mixed with three volumes of concentrated hydrochloric acid, which compound is formed?

- a) Nitrogen Dioxide
- b) Aqua Regia
- c) Trinitrotoluene
- d) Picric Acid

29. Energy is not emitted or absorbed continuously, Rather, it is emitted or absorbed in a discontinuous manner and in the form of wave packets. This clause represents which of the following theories?

- a) Rutherford's Theory
- b) Dalton's Theory
- c) Planck's Quantum Theory
- d) Bohr's Theory

30. Vicinal dihalides have \_\_\_\_\_ halogens on adjacent carbon atoms.

- a) 1
- b) 2
- c) 3
- d) 4