Question Bank for CT2

1) Store house of genetic material in the nucleus_____.

a) **Chromosome** b) Nucleoplasm c) Nucleolus d) Nucleoid

2) The transfer of electrons from one atom to the other is called _____ bond.

a) covalent b) **Ionic** c) Hydrogen d) peptide

3) Bee wax is the example of _____

a) Proteins b) Carbohydrates c) **Lipids** d) Nucleic acids

4) Which enzyme plays a major role in transcription?

A) DNA Polymerase b) **RNA Polymerase** c) DNA Ligase d) Endonuclease

5) The negatively charged ions are called _____

a) **Anions** b) Cations c) Atom d) Molecules

6) Global warming can be controlled by_____.

a) Reducing reforestation b) **Reducing deforestation** c) Increasing deforestation d) Increasing fossil fuel usage

7) DNA replication enzyme is_____.

a) Restriction enzyme b) **DNA polymerase** c) RNA Polymerase d) Ligase

8) The two DNA strands are connected by _____ bond.

a) Ionic b) Covalent c) **Hydrogen** d) Peptide

9) The codon which initiate protein synthesis_____.

a) **AUG** b)AAA c)UAA d) UAG

10) The Lock and Key model is proposed by

a) Mendel b) **Emil Fischer** c) Schwann d) Robert Hooke

11) _____ is called as table sugar.

a) Glucose b) Lactose c) Fructose d) **Sucrose**

12) In RNA, Purine based adenine pair with _____.

a) Thymine b) Guanine

c) Cytosine d) **Uracil**

13) The discontinuous DNA fragments present in lagging strand are called _____.

a) **Okazaki** b) Lagging c) RNA d) Molecular

14) The groove on the surface of enzyme is called as_____.

a) **Active site** b) Exon site c) Gene site d) Inactive site

15) _____ is the termination codon.

a) AUG b) CUG c) UGC d) **UAA**

16) The use of DNA as a pharmaceutical agent to treat disease is called_____.

a) SCNT b) Cloning c) **Gene therapy** d) Stem cell

17) The Positively charged ions are called as _____.

a) Anions b) **Cations** c) Atoms d) Molecules

18) The DNA structure was discovered by _____.

a) **Watson and crick** b) Watson and Smith c) Thompson and Smith d) Singer and Nicolson

19) In DNA, Thymine pair with _____.

a) Cytosine b) Guanine c**) Adenine** d) Thymine

20) The process of synthesis of mRNA from DNA is called_____

a) Replication **b) Transcription** c) Translation d) Protein synthesis

21) The initiation codon is _____.

a) **AUG** b) AGC c) AGG d) CGA

22) _____ bind at the active site of the enzyme.

a) Enzyme b) Trypsin c) Insulin d) **Substrate**

23) _____ protein is present abundantly in hair and nail

a) Haemoglobin b) Myoglobin c) **Keratin** d) Myosin

24) _____ are the segments of genes code for amino acids.

a) Introns **b) Exons** c) Triplet code d) Genetic code

25) _____ refers to numbers, variety and variability of living organism and ecosystem

a) Food chain b) Food Web c) **Biodiversity** d) Tropic level

26) The optimum temperature for enzyme action is_____

a) **35-40◦C** b) 40-45◦C c) 45-50◦C d) 50-55◦C

27) Amino acid are connected by _____ bond.

a) **Peptide** b) Ionic c) Covalent d) Hydrogen

28) Induced Fit model of enzyme action is proposed by _____.

a) Emil Fischer b) Schwann c) **Koshland** d) Mendel

29) _____ molecule is explained with induced fit model.

a) Lipid b) DNA c) RNA d) **Enzyme**

30) Most of the enzymes were locates in _____.

a**) Cytosol** b) Mitochondria c) Nucleus d) ER

31) _____is the optimum pH for Enzymes.

a) 2-3 b) 8-10 **c) 6-8** d) 4-6

32) The nitrogenous bases and sugar constitutes _____.

a) Pyramidine b) Purine c) Nucleotide d) **Nucleoside**

33) Blastulocytes are the example of _____ potency.

a) Totipotent **b) Pluripotent** c) Multipotent d) Unipotent

34) The pyrimidine, Cytosine in DNA base pair with _____.

a) Cytosine b) **Guanine** c) Adenine d) Thymine

35) _____ Genes does not code for amino acid.

a) Intron b) Axon c) Neuron d) Exon

36) The chemical bond is characterized by equal sharing of electrons between atoms is _____ bond.

a) Covalent b) Ionic c) Co-ordinate d) Hydrogen

37) _____ is threat to biodiversity

a) **Over exploitation** b) Disaster c) Flood d) Drought

38) _____ protein is abundantly present on the earth.

a) Haemoglobin b) Myoglobin c) keratin **d) Rubisco**

39) Steroids are the example of _____ macromolecule.

a) Proteins b) Carbohydrates **C) Lipids** d) Nucleic acids

40) Sucrose is the example of _____.

a) Disaccharide b) Monosaccharide c) Oligosaccharide d) Polysaccharide

PART – B

1) Short notes on nucleic acids and their components.
2) Difference between DNA and RNA.
3) Write about RNA and its types.
4) Explain ionic bond with an example.
5) Short notes on importance on biodiversity.
6) What are the factors which affect biodiversity?
7) Define biodiversity and its types.

8) Write some functions of proteins?
9) Importance of Proteins
10) Explain about Gene therapy and its types?
11) Write short notes on genetic code and codons.
12) Write about central dogma?
13) What are the types of RNA? Explain.
14) Explain covalent bond with example.
15) Difference between competitive and non-competitive inhibition.
16) Define totipotent, pluripotent and Unipotent.
17) Short notes on RNA and its types and Functions.
18) Write about the applications of protease enzyme.

PART – C

1. Briefly explain about Transcription process with neat labeled diagram.

2. Write about various factors which affect the enzyme activity.

3. Write about DNA structure and components with neat labeled diagram.

4. Write an essay about Biological Macromolecules.

5. Write short notes on enzyme mechanism and its theory?

6. Elaborate about protein synthesis with suitable diagram

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7. What is r-DNA technology? Explain the steps and applications of it.

8. Write short notes on different protein structures with example.