

**Course Title: Biochemistry I**

**Micro 2<sup>nd</sup>**

**Student Name: MUHAMMAD SAYYAM NIAZ**

**Student ID: 16918**

**Max Marks: 30**

---

**Note:**

**There are 20 MCQs and 10 match column questions, each carry ONE mark with grand total of 30 marks.**

**Choose the appropriate option and write in the ANSWER section.**

**ATTEMPT all questions.**

---

**1. The general structure of all amino acids are same except for**

\_\_\_\_\_

- a) Lysine
- b) ***GLYCINE***
- c) Proline
- d) Alanine

**2. Macromolecule found in cell membrane that helps in signaling is:**

- a) Carbohydrate
- b) ***PROTEIN***
- c) Lipid
- d) Nucleic acid

**3. How is the secondary structure of a protein stabilized?**

- a) Van der wall forces
- b) ***HYDROGEN BONDING***

- c) Covalent bond
- d) Hydrophobic bond

**4. The uprights of double helix DNA consist of:**

- a) Pentose sugar
- b) Phosphate group
- c) **BOTH A AND B**
- d) Only nitrogenous bases

**5. Which of the following is an essential amino acid?**

- a) Cysteine
- b) **VALINE**
- c) Glutamine
- d) Asparagine

**6. A nucleotide is formed of which of the following units?**

- a) Nitrogen base and nucleoside
- b) **Nucleoside and phosphate**
- c) Nucleoside and sugar
- d) Sugar and phosphate

**7. Which statement is correct about Hemoglobin molecule?**

- a) Made up of two alpha helix and one beta sheets.
- b) Made up of one alpha helix and two beta sheets.
- c) **Made up of two alpha helix and two beta sheets.**

d) Made up of one alpha helix and one beta sheets.

**8. mRNA consist about \_\_\_% of the total RNA present in cytoplasm.**

a) 4-10%

**b) 5-10%**

c) 7-10%

d) 8-10%

**9. All are example of Alpha helix except:**

a) Collagen

b) Myosin

**c) Fibrin**

d) Proline

**10. Which among the following is not non-essential amino acid?**

a) Serine

b) Asparagine

**c) Lysine**

d) Alanine

**11. To which of the following does thymine form hydrogen bonds in DNA?**

**a) Adenine**

- b) Thymine
- c) Cytosine
- d) Guanine

**12. What is true about peripheral protein?**

- a) They are really stuck in membrane
- b) They are hardly to remove from plasma membrane.
- c) They can be easily removed from plasmalema.
- d) ***Both a and b***

**13. Choose the incorrect statement**

- a) Protein helps in the transportation of oxygen
- b) ***Some Proteins not supports in the body defense against infection.***
- c) Enzymes which are biological catalyst, are proteins.
- d) Some protein helps in the movement of muscles

**14. Which of the following statements about amino acids is correct?**

- a) Amino acids are uncharged at neutral pH
- b) Amino acids are classified according to the structures and properties of their side chains
- c) Amino acids in proteins are mainly in the D-configuration
- d) ***Twenty four amino acids are commonly used in protein synthesis***

**15. Alpha helix protein is formed by H-bonding between C-O and NH<sub>2</sub> group of the amino acids situated at:**

- a) 2- residues ahead in linear sequence
- b) 3- residues ahead in linear sequence
- c) ***4- residues ahead in linear sequence***
- d) 5- residues ahead in linear sequence

**16. The two polynucleotide strands of DNA arranged in \_\_\_\_ manner to each other.**

- a) ***Antiparallel***
- b) Opposite
- c) Both a and b
- d) None

**17. Protein obtained by a process, without cleavage of peptide bonds**

- a) Secondary protein
- b) ***Primary protein***
- c) Conjugated protein
- d) Simple protein

**18. Pyrimidine molecule include all nitrogenous base except:**

- a) Uracil
- b) Thymine
- c) ***Guanine***
- d) Cytosine

**19. Stabilizing factor of primary structure of a protein is:**

- a) ***Peptide bond***
- b) Hydrogen bond
- c) Covalent bond
- d) Disulphide bond

**20. The two strands in a DNA molecule is joined by;**

- a) Covalent bond
- b) Ionic bond
- c) ***Hydrogen bond***
- d) Phosphodiester bond

**Match column A with column B and write the correct option (only correct letter) in column C**

<b>Sr No</b>	<b>A</b>	<b>B</b>	<b>C</b>
21	Carrier protein	A Dipolar	<i>E</i>
22	Hydrophilic amino acid	B Unit model	<i>F</i>
23	Zwitterion	C Nucleotides	<i>A</i>
24	Purine	D Lysine	<i>G</i>
25	Hydrophobic amino acid	E Energy required	<i>I</i>
26	Keratin	F Aspartic acid	<i>H</i>
27	Danielli – Davson Model	G Adenine	<i>J</i>
28	Deoxyribonucleic acid	H Nails	<i>C</i>
29	Robertson model	I Methionine	<i>B</i>
30	Essential amino acid	J Sandwich model	<i>D</i>

