

Name-

Roll No-

LS2101: BIOCHEMISTRY

Class Test 1

Date: 24.08.23

Full Marks= 10

Answer ALL the questions

Q1. In Ramachandran plot left-handed alpha helix is present in [1]

- a) left and upper quadrant
- b) right and lower quadrant
- c) left and lower quadrant
- d) right and upper quadrant

Q2. The molecular weight of Val and Ser are 117 Dalton and 105 Dalton, respectively. Val and Ser form a dipeptide Val-Ser. The molecular weight (in Daltons) of the dipeptide is [1]

- a) 200
- b) 204
- c) 186
- d) 222

Q3. Draw the structures of the Sulphur containing amino acids. [1]

Ans: -

Q4. How many ionizable groups (consider side chains only) are present in the polypeptide shown below?

N-ter-Glu-Cys-Ser-Gly-Met-Ala-Pro-Asp-C-ter [1]

Ans: -

Q5. Explain the reason why the length of a typical C-N single bond is 0.147 nm but the length of a peptide bond (C-N) is approximately 0.132 nm. [1]

Ans: -

Q6. Draw the structures of ATP and GTP. [2]

Ans: -

Q7. Draw the structure of Sucrose and mention it's full systematic name. [1]

Ans: -

Q8. If the pH of the solution is 4.60, calculate the $[H^+]$ and $[OH^-]$ for the solution at 25 °C. [1]

Ans: -

Q9. Proteins show characteristic absorbance spectra at 280nm. Which amino acids are responsible for this phenomenon. Draw their structures. [1]

Ans:-