



**Department of Biotechnology**  
**Dayananda Sagar College of Engineering, Bengaluru**  
Shavige Malleshwara Hills, Kumaraswamy Layout, Bangalore – 560 078  
(An Autonomous Institute affiliated to VTU, Approved by AICTE & ISO 9001:2008 Certified)  
Accredited by National Assessment and Accreditation Council (NAAC) with 'A' grade

**Alternate Assessment Tool (AAT-1): Quiz -1**

**Semester: IV**  
**Subject: Structural Biology**  
**Total Marks: 10**

**Date: 28-01-2017**  
**Subject Code: BT42**

*Note: Select the correct answer from the given options*

S. No	Question	Marks	CO
1.	Which of the following is <b>NOT</b> a secondary bond which stabilizes the polypeptide chain in protein structure (a) Peptide linkage (b) Disulphide linkages (c) Hydrogen Bonding (d) Hydrophobic interaction	01	1
2.	Name the scientist who demonstrated the 3D structural data of collagen (a) GN Ramachandran (b) Max Perutz (c) Linus Pauling (d) Frederick Sanger	01	1
3.	Name the single letter amino acid code for Aspartic acid (a) E (b) N (c) D (d) Q	01	1
4.	Name the amino acid which forms helix in a polypeptide chain (a) Glycine (b) Proline (c) Tryptophan (d) Both a & b	01	1
5.	Which of the following is correct about the $\phi$ and $\psi$ -angles of a left handed alpha helix (a) $\phi: -57; \psi: -47$ (b) $\phi: 57; \psi: -47$ (c) $\phi: 57; \psi: -47$ (d) $\phi: 57; \psi: 47$	01	1
6.	The energy required for the conversion of molten globule state to native state by a polypeptide chain (a) -100 kcal/mol (b) 120 kcal/mol (c) -120 kcal/mol (d) -100 kcal/mol	01	1
7.	The molecular weight of molecular chaperon HSP70 is _____ Dalton (a) 68000 (b) 70000 (c) 72000 (d) 80000	01	1
8.	The function of $\beta$ -mercaptoethanol in Anfinsen's experiment (a) Reducing agent (b) Oxidizing agent (c) Denaturing agent (d) Stabilizing agent	01	1
9.	Select the protein which is not belong to fibrous protein (a) Collagen (b) Keratin (c) Myoglobin (d) Fibroin	01	1
10.	Analyze mutational changes in hemoglobin gene that leads to sickle cell anemia (a) Valine is substituted by Glutamic acid (b) Glutamic acid is substituted by Valine (c) Valine is substituted by Glutamine (d) Glutamine is substituted by Valine	01	1

**Signature of Course Coordinator**

**Signature of HOD**