SARDAR PATEL UNIVERSITY
T.Y. B.Sc. (Bio Informatics) EXAMINATION, V SEM

Date : 03rd Nov 2018, Saturday   Time :10:00am To 01:00pm
Session : Morning   Sub: Structural Bioinformatics and RDBMS-I
Course No : US05CBNF06   Total marks : 70

Q – 1 Multiple Choice Question   [10]

  i) The Imino acid found .
    a) Aspargine   b) Phenyl Alanine   c) Histidine   d) Proline

  ii) Protein folding leads to _____ in entropy
    a) Increase   b) Decrease   c) No-change   d) Small change

  iii) Which of the following group of proteins assist in the following of other proteins?.
    a) Proteases   b) Proteosomes   c) Templates   d) Chaperones

  iv) During protein folding hydrophobic region fold
    a) Outside   b) Inside   c) Destroy   d) None of these

  v) -CF gene is _____ found on chromosome number.
    a) 5   b) 7   c) 1   d) 3

  vi) How many conceptual schemes are available per database?
    a) One   b) Two   c) Three   d) Four

  vii) Relation can be represented as.
    a) Record   b) Data   c) Raw   d) Table

  viii) _____ SQL PLUS command is use to execute a command file.
    a) Connect   b) Save   c) Start d) Spool

  ix) Table level constraints are stored as a part as a part of the _____ table definition.
    a) Primary   b) Local   c) Temporary   d) Global

  x) Setting a _____ value is appropriate when the actual value is unknown.
    a) Not Null   b) Check   c) Boolean   d) Null

Q – 2 Short Answer attempt any ten (Each carry 2 marks)   [20]

  i) Discuss the forces involves in the stabilization of protein structure.
  ii) What type of information is present in protein primary structure.
  iii) Explain Levinthal's paradox.
  iv) What are prions?.
  v) How Alzheimer disease cause?.
  vi) What is mad cow disease?.
  vii) What is Relationship?.
  viii) List type of relationship explain any one.
  ix) Explain the following terms
    i) Set pagesize   ii) Set linesize   iii) ed   iv) Save
  x) Explain concept of DUAL table
  xi) Differential Null Value and an Empty string
  xii) Explain use of BETWEEN operator in concern with Range searching

Q – 3   a) What are protein motifs? Explain them.   [05]
       b) Explain Ramchandran plot and its significance   [05]

OR

Q – 3   a) Write note on yeast to hybrid method.   [05]
       b) Explain quaternary structure of protein with example.   [05]

(1)

(P.T.O.)

Q – 4	a)	What is protein folding? Discuss the thermodynamics behind it.	[06]
	b)	How the misfolding of protein occur and its consequence.	[04]

OR

Q – 4	a)	Write note on i) Crutzfeldt – Jacob disease.	[10]
		ii) Bovine spongiform encephalopathy iii) Cystic Fibrosis	

Q – 5		Explain three different Data model.	[10]

OR

Q – 5		What is ER modelling? Explain in detail with example.	[10]

Q – 6	a)	Explain various ways to change structure of a table using alter statement	[05]
	b)	Explain Primary Key constraint in detail	[05]

OR

Q – 6	a)	Explain DML statements.	[05]
	b)	Explain Foreign Key constraint in detail.	[05]

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