CS

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SARDAR PATEL UNIVERSITY

M.Sc. Integrated Biotechnology Examination - Second Semester

Friday, 1st April 2016

PS02CIGB03- Computer Applications

Time: 10:30 am to 1:30 pm **Marks: 70**

Q-1 **Multiple Choice Questions** **[08]**

1 _____ is an association among several entities.

a) Entity b) Domain c) Relationship d) None of these

2 In E-R diagram _____symbol is used to represent attributes.

a) Rectangle b)Ellipse c) Diamond d) None of these

3 The _____ constraint can be applied at column level only.

a) Primary b) Foreign c) Not Null d) None of these

4 The result of function ABS (-55) is _____.

a) -55 b) 55 c) -1 d) None of these

5 Privileges once given can be denied to a user using _____ command.

a) Recall b) Grant c) Revoke d) Drop

6 The _____ attributes is used to declare a variables based on definition of column in a table.

a) %rowtype b) %type c) %row d) %rowid

7 The sequences that differ because of a gene duplication event is called _____

a) Paralogous b) Orthologous c) Analogous d) None of these

8 NCBI stands for _____

a) National Center for Biotechnology Information

b) National Care for Biotechnology Information

c) National Center for Biochemical Information

d) None of these

Q-2 **Write short answers of following questions. (Any 7)** **[14]**

1 Define: Information and Data

2 What is E-R diagram? Explain its components in brief.

3 Explain MIN() function with example.

4 Write a syntax and use of if…end if statement.

5 Explain unique key constraint in brief.

6 Explain commit statement with syntax and its use.

7 Explain LENGTH ( ) function with example.

8 Define Homologous and Orthologous.

9 Give full form of EMBL, DDBJ, PIR and BLAST.

Q-3: (A) Define DBMS. Explain advantages of DBMS. **[06]**

Q-3: (B) Explain components of DBMS in detail. **[06]**

OR

Q-3: (B) What is Normalization? Explain 1NF, 2NF and 3NF form with example. **[06]**

Q-4: (A) List all the Codd's rules and explain any five of them. **[06]**

Q-4: (B) Explain Primary Key and Foreign Key concept with proper syntax and example. **[06]**

OR

Q-4: (B) Explain in detail Select and Insert statements with example. **[06]**

Q-5: (A) What is explicit cursor? Explain Open and Fetch statement of explicit cursor with example. **[06]**

Q-5: (B) Explain the structure of PL/SQL block in detail. **[06]**

OR

Q-5: (B) What is procedure? Explain procedure with syntax and example. **[06]**

Q-6: (A) Describe central dogma of molecular biology in detail. **[06]**

Q-6: (B) What is bioinformatics? Explain any five applications of bioinformatics in detail. **[06]**

OR

Q-6: (B) Discuss the nucleotide sequence database in detail. **[06]**

***** *All the best* *****