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Sardar Patel University
MSc Integrated Biotechnology Examination -Semester 2
PS02CIGB03: Computer Applications
Saturday 25th April, 2015
10:30 am to 1:30 pm

Note: **Total Marks: 70**

1. Figures to the right indicate marks.
2. Draw neat and labelled diagram, wherever necessary.

Q.1 **Multiple choice questions** [08]

1 Maximum number of characters allowed in varchar data type is _____.

a) 250 b) 255 c) 4000 d) 4500

2 _____ represent a directed relationship between two record type so called owner record type and member record type.

a) record type b) set type
c) relation scheme d) intermediate record type

3 A Sub Query is also termed as _____query.

a) Nested b) View c) Index d) Joins

4 _____command is used to change a content of table.

a) Update b) Modify c) Change d) Alter

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

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

6 Which of the following is not three-schema architecture for a database?

a) Hierarchical b) Physical c) Network d) Relational

7 Which of the following tool is not available at DDBJ?

a) LIBRA b) GTOP c) SAKURA d) Entrez

8 Study of change in transcript level is known as

a) Proteome b) Proteomics c) Genome d) Genomics

Q.2 **Answer the following questions:[Any Seven]** [14]

1 Why database are required?

2 Explain concept of DUAL table.

3 Write syntax of Procedure.

4 What is column level constraints?

5 Explain distinct clause in brief.

6 Draw the PL/SQL Block.

7 Explain Group By clause.

8 What is central dogma?

9 Give full form of the following:

(a) NCBI (b) EMBL

Q.3 A Write advantages and disadvantages of DBMS. [06]

	B	What is Normalization? Explain 1NF, 2NFand 3NF with example.	[06]
		OR	
	B	What is ER modeling? Explain in detail with diagrams.	[06]
Q.4	A	List and explain CODD's principles.	[06]
	B	Write down the applications of DBMS.	[06]
		OR	
	B	Explain the concept of PRIMARY KEY constraint with example.	[06]
Q.5	A	Write a detailed note on joining of tables.	[06]
	B	What is view? Why it is created, explain it syntax & example.	[06]
		OR	
	B	What are database triggers? Explain types of trigger with an appropriate example.	[06]
Q.6	A	Discuss architecture of NCBI in detail.	[06]
	B	Write down the features of Biological Database.	[06]
		OR	
	B	What are genomics and proteomics? Explain their role in understanding system biology.	[06]

—X—