



MBC-003-006303 Seat No. _____

B. Sc. (Bioinformatics) (Sem. III) (CBCS) Examination

November / December – 2016

**BI - 302 : Database Management Systems in
Bioinformatics
(Old Course)**

Faculty Code : 003

Subject Code : 006303

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) All questions are compulsory.
(2) The right side figures indicate total marks of the question.

SECTION – I

- 1 Answer the short answer questions : **20**
- (1) The standard language to work with database is _____
 - (2) SQL commands can be written in _____.
 - (3) What is the use of DML command?
 - (4) What is the use of Select * from command?
 - (5) A DISTINCT option is used to _____
 - (6) In an Entity-Relationship Diagram Rectangles represent _____
 - (7) Who proposed the relation model?
 - (8) The primary key must be _____ and _____
 - (9) Which command is used to remove a relation from an SQL database.
 - (10) UML stands for?
 - (11) Which SQL Query is used to remove a table and all its data from the database?

- (12) _____ is the structure of the database?
- (13) Which techniques are used to study the cellular proteome?
- (14) _____ database collects data from different sources and makes them available in a new and more convenient.
- (15) Protein is flexibly, but when its energy level is low, is it stable (True / False)
- (16) In PROSITE file format, every line starts with 3 letter symbol
- (17) In the ProDom search by kingdom is known as _____
- (18) What is the id number format in FlyBase?
- (19) By controlling the data redundancy, the data consistency is not acquired. (True / False).
- (20) What can be the other names of secondary database are often known as?

SECTION – II

- | | | |
|----------|---|-----------|
| 2 | Answer the following questions : | 25 |
| | (A) Answer any three : | 6 |
| | <ol style="list-style-type: none"> (1) What is a record in database? (2) What is an E-R diagram? (3) What are Attributes? (4) Define: Physical Data Model. (5) SMART (6) Challenges to design biological database | |
| | (B) Answer any three : | 9 |
| | <ol style="list-style-type: none"> (1) Give the classification of Database Management Systems. (2) What are Structural Constraints? (3) Give the syntax of insert query in Oracle. (4) What is Data Independence? (5) KEGG (6) Write note on FlyBase. | |

(C) Answer any **two** : 10

- (1) Explain DBMS Architecture in detail
- (2) Characteristics of the Database Approach.
- (3) Explain view with example.
- (4) Summarize the protein family and domain databases.
- (5) How scientific data were managed?

3 Answer the following questions : 25

(A) Answer any **three** : 6

- (1) Define: Data independence.
- (2) Define: Entity and Entity set.
- (3) What is the use of DISTINCT in SQL?
- (4) Define the use of operators in oracle.
- (5) What is DGENE & EGENE.
- (6) Pathway database of KEGG.

(B) Answer any **three** : 9

- (1) List basic data types in Oracle.
- (2) Differentiate: DBMS V/s RDBMS
- (3) What are sequences? Give the complete syntax to create sequences.
- (4) Explain alter table query with syntax and example.
- (5) Pfam
- (6) What is the need of Secondary Database?

(C) Answer any **two** : 10

- (1) Perform the following in context to the following table: Table name: Employee

Fields	Data type	Size
emp_id	number	5
pmp_name	varchar2	35
emp_city	varchar2	30

- (a) Write a query to create the above 'Employee' table.
 - (b) Write a query to select records from 'Employee' table whose name starts with 'A'
- (2) What is a Cluster? Explain types of Cluster.
 - (3) What are Synonyms? Explain using syntax and example.
 - (4) What are the applications of Bioinformatics Databases?
 - (5) Write note on SYSTERS
