

ADVANCED DIPLOMA IN BIOINFORMATICS (A.D.B.) (CBCS-2019 COURSE)
A.D.B. SEM-I : WINTER :- 2021
SUBJECT: DBMS & MONGODB

Day : Monday
Date 7/2/2022

W-21126-2021

Time : 10:00 AM-01:00 PM
Max. Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Both the Section should be written in Same Answer Book.

SECTION – I

Q.1 Attempt **ANY FIVE** of the following:- **(10)**

- a) Synonyms.
- b) Datamart.
- c) Types of attributes.
- d) Participation constraints.
- e) Handling of bucket overflow.
- f) Redolog.
- g) Datablock.

Q.2 Attempt **ANY TWO** of the following:- **(10)**

- a) Discuss the term data model and types of data model.
- b) Explain in brief Normalization and different types of Normal form.
- c) Construct an E-R diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted.

Q.3 Answer **ANY TWO** of the following:- **(10)**

- a) Explain concept of indexing and types of indexing.
- b) Draw and explain oracle architecture of system.
- c) Write SQL queries for:-
 - i) Creating a table
 - ii) Drop a table

SECTION - II

Q.4 Attempt **ANY FIVE** of the following:- **(10)**

- a) What is a Namespace in Mongo DB?
- b) What are the data types supported in Mongo DB?
- c) What are Indexes in Mongo DB.
- d) Name storage engine used by Mongo DB.
- e) What is primary key in Mongo DB? How it is generated?
- f) What language is Mongo DB written in?
- g) Basic CRUD commands for document in Mongo DB.

P.T.O.

Q.5 Attempt **ANY TWO** of the following:- **(10)**

- a)** Write a command for :-
- i) Creating Database and collection
 - ii) Insert document
 - iii) Find
 - iv) Drop Database
- b)** Explain the following with basic commands:-
- i) Limit
 - ii) Sort
- c)** While creating Schema in Mongo DB what are the points need to be taken in consideration?

Q.6 Answer **ANY TWO** of the following **(10)**

- a)**
- i) Mention the command to insert document in database called Drug Bank and collection called Drug.
 - ii) Find the inserted document.
 - iii) Update with target name.
- b)** Explain the following with basic commands:-
- i) Skip
 - ii) Aggregation on Field.
- c)** What is Bson in Mongo DB and what are some features of Bson.

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