

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2014**Fourth Semester**

Vocational Course—Computer Science

DATA BASE MANAGEMENT SYSTEMS

[For B.Sc. Mathematics (Model II)]

Time : Three Hours

Maximum Weight : 25

Part A

*Answer all questions in this Part.
For a bunch of four questions, the weight is 1.*

- I. 1 Data about data is called :
- (a) Schema. (b) DBA.
(c) Metadata. (d) Table.
- 2 The collection of information stored in database at a particular moment is called :
- (a) Schema. (b) DBA.
(c) Instance. (d) Meta data.
- 3 For each attributes, the set of permitted values are called :
- (a) Domain. (b) Range.
(c) Data. (d) File.
- 4 Which of the following component in E-R diagram represents desired attributes ?
- (a) Rectangle. (b) Dashed ellipses.
(c) Double lines. (d) Diamonds.
- II. 5 A value which does not exist is called a ———.
- (a) Null. (b) Zero.
(c) Integers. (d) Characters.
- 6 A row is also known as ———.
- (a) Entity. (b) Field.
(c) Relation. (d) Table.

Turn over

- 7 Which SQL keyword must be used to remove duplicate rows from the result relation ?
(a) DELETE. (b) DISTINCT.
(c) NOT EXISTS. (d) UNIQUE.
- 8 Four DML commands are _____.
(a) CREATE, UPDATE, DELETE, SELECT.
(b) INSERT, UPDATE, DROP, SELECT.
(c) CREATE, ALTER, DELETE, SELECT.
(d) INSERT, UPDATE, DELETE, SELECT.
- III. 9 The slowest storage media such as magnetic tape is referred as _____.
(a) Primary storage. (b) Secondary storage.
(c) Tertiary storage. (d) On line storage.
- 10 The components of a composite attribute can be accessed by using _____ notation.
(a) Name. (b) Single bracket.
(c) Dot. (d) Semi colon.
- 11 Magnetic disk is referred as _____.
(a) Primary storage. (b) On line storage.
(c) Off line storage. (d) Tertiary storage.
- 12 An attribute or set of attributes used to look up records in a file is called a _____.
(a) Primary key. (b) Candidate key.
(c) Foreign key. (d) Search key.
- IV. 13 Bus is a _____.
(a) Inter connection network. (b) Local-Area network.
(c) Wide-Area network. (d) Storage Area network.
- 14 Clusters are also known as _____.
(a) Shared memory. (b) Shared disk.
(c) Shared nothing. (d) Hierarchical.
- 15 Search algorithms that use an index are referred to as _____.
(a) Primary index. (b) Secondary index.
(c) Index scans. (d) Clustering index.

16 Which of following is an external sort ?

- (a) Quick sort.
- (b) Selection sort.
- (c) Merge sort.
- (d) Bubble sort.

(4 × 1 = 4)

Part B

*Answer any five questions.
Each question carries a weight of 1.*

- 17 What you mean by data manipulation language ?
- 18 Define entity sets.
- 19 What is the difference between Primary key and Secondary key ?
- 20 What is extension and intension ?
- 21 Define skew.
- 22 Define multilevel indices.
- 23 How does a β -tree differ from a β^+ tree ?
- 24 Define merge sort.

(5 × 1 = 5)

Part C

*Answer any four questions.
Each question carries a weight of 2.*

- 25 Write the functions of a database administration.
- 26 Write a note on mapping cardinality.
- 27 What are the commands used for modifying the data base.
- 28 What are aspects need to be addressed when adding persistence support to C++ ?
- 29 Explain how a persistent pointer is implemented.
- 30 Explain transaction-server process structure with a neat diagram.

(4 × 2 = 8)

Part D

*Answer any two questions.
Each question carries a weight of 4.*

- 31 Discuss about Entity-Relationship design issues.
- 32 Write a note on Raid level 2 and Raid level 5.
- 33 Explain centralized and client-served architectures with neat diagram.

(2 × 4 = 8)