

265054

BCA-202

B.C.A. Second Year Examination, 2013

B.C.A.

PAPER-II

DATABASE MANAGEMENT SYSTEMS

Maximum-Marks : 100

SECTION-A

खण्ड-अ

Marks : 50

Time : 1½ Hours

Candidates are required to first answer the Section-A (Multiple Choice Questions) by marking correct choice on OMR Sheet in prescribed time. All questions are compulsory and carry equal marks. There is no negative marking for wrong answers. सर्वप्रथम खण्ड अ के सभी वस्तुनिष्ठ प्रश्नों के उत्तर ओ. एम. आर. शीट में परीक्षार्थी को निश्चित समय में देने हैं। सभी प्रश्न अनिवार्य एवं समान अंक के हैं गलत उत्तर का ऋणात्मक मूल्यांकन नहीं किया जायेगा।

SECTION-B

खण्ड-ब

Marks : 50

Time : 1½ Hours

After depositing O.M.R. Sheet of Section-A with invigilator, the candidate are required to answer one question from each unit (each question in 250 words) in a separate answer-book provided to them. All questions carry equal marks. Attempt one question from each unit.

खण्ड अ की ओ. एम. आर. शीट पर्यवेक्षक को जमा कराने के पश्चात् परीक्षार्थी खण्ड ब के प्रत्येक इकाई से एक प्रश्न का उत्तर दी गई उत्तरपुस्तिका में देंगे। प्रत्येक प्रश्न का उत्तर लगभग 250 शब्दों में दिया जाना है एवं सभी प्रश्नों के अंक समान हैं। प्रत्येक युनिट से एक प्रश्न करना अनिवार्य है।

SECTION-A

UNIT-I

1. This database has only one table :
(A) Relational (B) Large
(C) Flat-file (D) DBMS
2. To store picture in a database requires field.
(A) BLOB (B) Text
(C) Image (D) Logical
3. The language used by application programs to request data from the DBMS is referred to as the :
(A) DMC (B) DDL
(C) DCL (D) None of the above
4. Making a change to the conceptual schema of a database but not affecting the existing external schemes is an example of :
(A) Physical data independence (B) Integrity control
(C) Functional dependency (D) Logical data independence
5. An entity that is existence-dependent on some other entity is known as
(A) Strong entity (B) Weak entity
(C) Regular entity (D) All the above
6. A derived property is shown as :
(A) Diamond (B) Double diamond
(C) Dotted ellipse (D) Double ellipse
7. In database architecture, the level closest to the users is :
(A) Internal level (B) External level
(C) Conceptual level (D) Inner level
8. The database system provides the enterprise with control of its data.
(A) Distributed (B) Centralized
(C) Decentralized (D) Standardized

9. The user who interacts with the system from online workstations or terminals is :

- (A) Application programmer (B) Database administrator
(C) Data administrator (D) End user

10. Properties can be :

- (A) Simple (B) Composite
(C) Single valued (D) All the above

UNIT-II

11. The number of tuples is called :

- (A) Cardinality (B) Degree
(C) Row (D) Attribute

12. Domains are :

- (A) Dynamic (B) Static
(C) Attribute (D) None of the above

13. Which of the following properties a relation possesses :

- (A) There are no duplicate tuples (B) Tuples are unordered, top to bottom
(C) Attributes are unordered, left to right (D) All the above

14. is a named relation that is not a derived relation.

- (A) Base (B) Query result
(C) Expressible (D) None of the above

15. denotes pools of values from which actual attribute values are drawn.

- (A) Scalar (B) Vector
(C) Domain (D) All the above

16. The number of attributes in a given relation is called :

- (A) Cardinality (B) Degree
(C) Row (D) Domain

17. Which among the following is true :

- (A) Domains are static (B) Relation are dynamic
(C) Both (a) & (b) (D) None of the above

18. A candidate key that is not a primary key is called :
- (A) Foreign key (B) Unique key
(C) Local key (D) Alternate key
19. Which among the following does not hold true for primary key :
- (A) It performs the unique identification function
(B) It cannot be null
(C) It may not be a combination of more than one attribute
(D) All the above
20. Any relation by definition is in :
- (A) First normal form (B) Second normal form
(C) Third normal form (D) Fourth normal form

UNIT-III

21. An existing base table can be changed at any time using :
- (A) Change table (B) Alter table
(C) Modify table (D) None of the above
22. in SQL consists of descriptors for an individual database :
- (A) Schema (B) Catalog
(C) Restrict (D) Cascade
23. Principal DML statements are :
- (A) Select (B) Insert
(C) Both (a) & (b) (D) None of the above
24. Embedded SQL statements are prefixed by :
- (A) EMBED SQL (B) EXEL SQL
(C) RUN SQL (D) None of the above
25. The clause eliminates all rows for which the condition expression does not evaluate to true :
- (A) From (B) Having
(C) Group by (D) Where

26. is just a named expression of the relational algebra or relational calculus.
- (A) View (B) Clause
(C) Aggregate (D) Tuple
27. An existing view can be destroyed by :
- (A) Delete view (B) Drop view
(C) Destroy view (D) Kill view
28. Which statement words true for SQL :
- (A) SQL does not provide anything like strong typing
(B) SQL does not have any concept of subtypes and supertypes
(C) Both (a) & (b)
(D) None of the above
29. We can display the rows using ascending or descending order using :
- (A) Group by (B) Sort by
(C) Order by (D) Arrange by
30. Which among the following is a wildcard character :
- (A) % (B) \$
(C) * (D) £

UNIT-IV

31. In model, data is stored using a downward tree :
- (A) Hierarchical (B) Network
(C) Relational (D) Both (a) & (b)
32. Which model uses pointers to navigate between stored data :
- (A) Hierarchical (B) Network
(C) Relational (D) Both (a) & (b)
33. Hierarchical model suffers from :
- (A) Increased risk of data inconsistency (B) Inflexible
(C) Every child must have a parent (D) All the above
34. In network model, a child can have :
- (A) Exactly one parent (B) Not more than two parents
(C) More than one parent (D) None of the above

35. The network model structures data in the form of :
- (A) Tree (B) Stack
(C) Queue (D) Graph
36. Well known database system that uses the network model include :
- (A) IDMS (B) RDM server
(C) Univac DMS-1100 (D) All the above
37. The DBTG model uses data structure to represent database entities & relationship between entities :
- (A) Record type (B) Set type
(C) Both (a) & (b) (D) None of the above
38. In CODASYL, to refer to an attribute with common name in two different records, a technique called is used.
- (A) Qualification (B) Prefix
(C) Addition (D) Both (a) & (b)
39. In accordance with DBTG, relationship between the records are implemented by means of special logical construction called :
- (A) Record (B) Data set
(C) Entity (D) Data relation
40. Using DBTG, to delete an existing record of type <record type>, is used.
- (A) ERASE <record type> (B) Delete <record type>
(C) Remove <record type> (D) Kill <record type>

UNIT-V

41. An index on any candidate key is called :
- (A) Primary index (B) Secondary index
(C) Unique index (D) None of the above
42. An index that does not contain an entry for every record in the indexed file is called :
- (A) Dense (B) Non-dense
(C) Clustered (D) Irregular
43. B-tree of order n cannot have more than data values at any given node :
- (A) n (B) 2n
(C) n^2 (D) $n - 1$

UNIT-II

2. (a) What do you understand by relations ? Explain different kinds of relations ? 5
(b) Write short note on domains. 5

OR

Explain different kinds of keys with example.

UNIT-III

3. Data is organized in 3 tables :
S(suppliers), P(Parts), SP(Shipment)
S(S#, SNAME, STATUS, CITY)
P(P#, PNAME, COLOR, WEIGHT, CITY)
SP(S#, P#, QTY)

Based on above tables, answer following queries :

- (a) Get supplier name for all suppliers who supply part P2.
(b) Get supplier number for all suppliers who are located in the same city as suppliers S2.
(c) Get total quantity of part P1 supplied by supplier S1.
(d) Create a view which contains supplier name, part, color, part weight, supplier city.

OR

Write short note on :

- (a) Views
(b) Embedded SQL

UNIT-IV

4. Discuss how records are inserted and deleted in hierarchical model.

OR

Discuss DBTG codasyl model. Explain its data retrieval and update facility.

UNIT-V

5. Differentiate between :
(a) Sparse & Dense indexing
(b) Logical & Physical file organization

OR

What is meant by file organization ? Discuss sequential & random file organization.