TAKORADI TECHNICAL UNIVERSITY
FACULTY OF APPLIED SCIENCE (COMP. SCIENCE DEPT)
END OF SECOND SEMESTER EXAMINATION 2019/2020(REGULAR)

DURSE NAME: Database Concepts and Technology COURSE CODE: ICT 112

URATION: 2 HOURS NOV 2020

ANSWER ALL QUESTIONS

1. _____ is an index data structure that maps content to its location within a database file.

2. Number of attributes in a relation is referred to as _____ .

3. Most widely used structure for recording database modifications is called

   A. Scheduling B. Buffering C. Log D. Blocking

4. A relational database consists of a collection of
   A. Fields B. Tables C. Records D. Keys

5. A group of associated fields is called a _____.
   A. attribute B. record C. field D. table

6. A collection of tables to represent data and relationship among data is represented through

   A. ER data model B. Relational model C. Semi-structured model D. Object based model

7. Records of files are stored in

   A. Rows B. Columns C. Indices D. Nodes

8. An attribute in a relation is a foreign key if the _____ key from one relation is used as an attribu in that relation.

   A. Candidate B. Primary C. Super D. Sub

9. DBMS is a collection of ..... that enables user to create and maintain a database.

   A Keys B. Translators C. Program D. Language Activity

10. Which of these is an example of an entity?
    A. Student B. a patient's name C. an employee's ID D. all of the abo

11. A _____ refers to a single characteristic or fact about an en

A. record B. table C. field D. primary key

12. For data access granting authorization to users is responsibility of

A. Database users B. Database administrator C. Database Manager D. Database system

13. Redundant information in a database can result in

A. Space wastage B. Integrity violation C. Assertion disturbance D. Null pointers

14. Metadata about structure of database is stored in

A. Data files B. Indices C. Data dictionary D. MetaData files

15. Typically, a database management system is managed by a person called a _____.

A. system manager B. technology manager C. database manager
D. database administrator

16. This key that uniquely identifies each record is called :

A. Unique Key B. Key Record C. Primary Key D. Field Name

17. In a database table, each category of information Is called _____

A. Tuple B. Field C. Record D. All Of Above

18. The overall description of a database is called_____.

A. Data integrity B. Data manipulation C. Database schema D. Data definition

19. .A_____is a set of one or more attributes that, taken collectively; allow us to identify uniquely an entity in the entity set.

A. Primary key B. Super Key C. Candidate Key D. Foreign Key

20. A Super key for which no proper subset is a super key. Such a minimal Super keys are called _____

A. Primary key B. Simple Key C. Candidate Key D. Foreign Key

21. Which one of the following is a set of one or more attributes taken collectively to uniquely identify record?

A. Candidate key B. Sub key C. Super key D. Foreign key

Integrity Constraints are enforced by Naive Users while DBA write those integrity constraints.

A. True B. False

23. A _____ in a table represents a relationship among a set of values.

A Column B Key C Row D Entry

24. Course(course_id,sec_id,semester). Here the course_id,sec_id and semester are _____ and course is a _____

A Relations, Attribute B Attributes, Relation C Tuple, Relation D Tuple, Attribut

25. A _____ refers to a single characteristic or fact about an ent

B. record B. table C. field D. primary key

SECTION B – ANSWER ALL QUESTIONS

1. Draw ER Diagram using symbols and notation for ***a simple school management system*** that captures details of student, course and instructor. In the system, student has relationship with course and instru has relationship with course. Describe the relationships and determine the type of relationship betwee the entities in the real world in your diagram. Student has name, stud id, phone number, email, date o birth, age, year enrolled and years stayed in school. Course has course code and course name. Instruct has name, instructor id and phone number. **10 marks**

2. With the help of a diagram explain the hierarchical and network database model. **5 marks**

3. Explain the following types of database users with practical example.
   i. Specialized user
   ii. Sophisticated user
   iii casual user
   iv Standalone users **10 mark**

4. State and explain with practical examples any five(5) advantages of database approach over file syste **10 mark**

validication