Logo, company name

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**MAKEUP TEST 1 MARCH 2022**

**MODULE DESCRIPTION : INFORMATION SYSTEMS III**

**MODULE CODE : ADS301**

**FACULTY : AGRICULTURE AND NATURAL SCIENCES**

**QUALIFICATION : DIPLOMA IN ICT**

**EXAM DATE : 15 MARCH 2022**

**SESSION STARTS AT : 14:00**

**DURATION : 120 MINUTES**

**TOTAL MARKS : 50**

**PAGES : 5 (Including the cover page)**

**ADDENDUMS : None**

**EXAMINER : PROF. BILLY KALEMA**

**MODERATOR : DR H MAUWA**

|  |
| --- |
| **INSTRUCTIONS**  **THIS QUESTION PAPER CONSISTS OF TWO (2) QUESTIONS.**   * READ THE QUESTIONS AND ANSWER STRICTLY AS INDICATED. * NUMBER ALL QUESTIONS CLEARLY AND CORRECTLY. * INCORRECT NUMBERING AND ILLEGIBLE WRITING WILL NOT BE CONSIDERED FOR MARKING. * THIS IS A CLOSED BOOK ASSESSMENT. * THE GENERAL UNIVERSITY OF MPUMALANGA POLICIES, PROCEDURES AND RULES PERTAINING TO EXAMINATIONS APPLY. |

**DO NOT TURN OVER BEFORE BEING TOLD TO DO SO**

**Due date: 15th March 2022 by 18 hrs59 (6.59 pm)**

**Question 1: (1 Mark Each) = Total 20 Marks**

**STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE/FALSE**

**TRUE/FALSE**

1. The ER diagram represents the conceptual database as viewed by the end user.

ANS: T

2. The ER model refers to a specific table row as an entity occurrence.

ANS: T

3. Attributes are types of entities.

ANS: F

4. Attributes have a domain that specifies the data type of the attribute.

ANS: F

5. Attributes cannot share a domain.

ANS: F

6. In an ER diagram, primary keys are usually bolded.

ANS: F

7. All simple attributes are also single-valued.

ANS: F

8. A simple attribute is an attribute that cannot be subdivided

ANS: T

9. The DBMS can easily handle multivalued attributes.

ANS: F

10. Derived attributes are stored in a special database table.

ANS: F

**SECTION B**

11. The \_\_\_\_ is actually a system-created database whose tables store the user/designer-created database characteristics and contents.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | meta dictionary | c. | data dictionary |
| b. | schema | d. | system catalog |

**ANS: D**

12. In a database context, the word \_\_\_\_indicates the use of the same attribute name to label different attributes.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | redundancy | c. | duplicate |
| b. | homonym | d. | synonym |

**ANS: B**

13. In a database context, a(n) \_\_\_\_indicates the use of different names to describe the same attribute.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | entity | c. | synonym |
| b. | duplicate | d. | homonym |

**ANS: C**

14. The \_\_\_\_ relational type is the “relational model ideal.”

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 1:1 | c. | \*:1 |
| b. | 1:\* | d. | \*:N |

**ANS: B**

15. The \_\_\_\_ relationship should be rare in any relational database design.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 1:1 | c. | \*:1 |
| b. | 1:\* | d. | \*:\* |

**ANS: A**

16. Since it is used to link the tables that originally were related in a \*:\* relationship, the composite entity structure includes—as foreign keys—at least the \_\_\_\_ keys of the tables that are to be linked.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | composite | c. | primary |
| b. | super | d. | unique |

**ANS: C**

17. Another name for a composite entity is a \_\_\_\_ entity.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | bridge | c. | directive |
| b. | linked | d. | referring |

**ANS: A**

18. A(n) \_\_\_\_ is an ordered arrangement of keys and pointers.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | table | c. | relationship |
| b. | superkey | d. | index |

**ANS: D**

19. When you define a table’s primary key, the DBMS automatically creates a(n) \_\_\_\_ index on the primary key column(s) you declared.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | key | c. | unique |
| b. | incomplete | d. | primary |

**ANS: C**

20. Codd’s Rule of \_\_\_\_ states:

Application programs and ad hoc facilities are logically unaffected when changes are made to the table structures that preserve the original table values (changing order of columns or inserting columns).

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Nonsubversion | c. | Comprehensive Data Sublanguage |
| b. | Logical Data Independence | d. | Integrity Independence |

**ANS: B**

**SECTION C**

21. The process of decomposition of a table is known as …………… (**Normalization**)

22. An association between two attributes of the same table is known …(**Functional Dependence)**

23. A table which is in 2NF, must be in……………………**(1NF)**

24. After normalization, the original table can be obtained by …………………**(Join Operation)**

25. A table in 3NF must not have ……………………… **(Transitive Dependencies)**

26. A table can be deleted from the database by using the \_\_\_(**DROP TABLE)**\_\_\_\_ command.

27. A(n) **\_(Cascading )\_\_\_\_\_\_\_** order sequence is a multilevel ordered sequence that can be created easily by listing several attributes, separated by commas, after the ORDER BY clause.

28. The **\_(HAVING)\_\_\_\_\_** clause of the GROUP BY statement operates very much like the WHERE clause in the SELECT statement.

29. A(n) **\_(Join)**\_\_\_\_\_is performed when data is retrieved from more than one table at a time.

30. An alias is especially useful when a table must be joined to itself in a(n) \_**\_(Recursive)**\_\_\_\_\_query.