Marks scored:

KATHMANDU UNIVERSITY
End Semester Examination
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Level : B. E.
Year : III

Course : GEOM 318
Semester: I

Exam Roll No:

Time: 30 mins.

F.M. : 10

Registration:

Date APR 0 9 2017

SECTION A
[20 Q.×0.5=10 marks]

1. A homogeneous data collection, normally describing a single kind of phenomenon
   a. dataset
   b. database
   c. relation
   d. database system

2. Database end user that masters the full database query and manipulation facilities
   a. Casual end-user
   b. Sophisticated end-user
   c. Naive end-user
   d. Systems analyst

3. DBMS component that ensures that tables can be stored, records can be inserted, retrieved, updated and deleted.
   a. Transaction manager
   b. Query optimizer
   c. Storage manager
   d. Concurrency controller

4. A relation schema consists of all these features, except:
   a. Name of the relation
   b. attribute definitions
   c. Integrity constraints
   d. Size of relation

5. Attributes that can be divided into one or more sub-parts are called:
   a. Multivalued attribute
   b. Derived attribute
   c. Composite attribute
   d. Single valued attribute

6. A relation is a subset of the Cartesian product of its:
   a. list of attributes
   b. list of tuples
   c. list of domains
   d. list of relations

7. The overall design of database is called
   a. Screen of database
   b. Schema of database
   c. View of database
   d. Structure of database

8. The values occurring in the _____key attribute of the referenced relation may occur in the ____ key attribute of the referencing relation.
   a. Foreign, Primary
   b. Primary, Foreign
   c. Primary, Candidate
   d. Primary, Super

9. In an ER diagram, derived attributes are denoted by:
   a. Single ellipses
   b. Double ellipses
   c. Double dashed ellipses
   d. Dashed ellipses

10. The entities that have primary keys are called:
    a. Strong entities
    b. Primary entities
    c. Weak entities
    d. Primary keys

11. All of the following string notations are accepted in SQL, except:
    a. '_ _%'
    b. '%_ _%'
    c. '_ _ _'
    d. '_ _ _"

12. Geometry collection represents complex shapes and are of three types, namely:
    a. Multipolygon, multiline, multipoint
    b. Multipoint, Multicurve, multisurface
    c. Polygon, line, point
    d. Line, curve, line string

13. The SQL clause that is same as project operator in relational algebra:
    a. From
    b. Where
    c. Select
    d. Having

14. SDBMS differs from a non-spatial DBMS in all the following, except:
    a. handle spatial operations with spatial extensions
    b. ability to tackle multiuser and transaction issues faced in GIS
    c. Usage of spatial indices
    d. Capacity and scalability decrease by query optimizer

15. An operation that calculates the average height of the trees for each species in a zone is:
    a. Focal operation
    b. Local operation
    c. Zonal operation
    d. Diagonal operation

16. Which SQL statement selects all rows from the relation called Apartment, with attribute SoldDate having values greater or equal to May 30, 2015?
    a. SELECT*FROM Apartment HAVING SoldDate>='05/30/2015'
    b. SELECT*FROM Apartment WHERE SoldDate<'05/30/2015'
    c. SELECT*FROM Apartment GROUPBY SoldDate>='05/30/2015'
    d. SELECT*FROM Apartment WHERE SoldDate>='05/30/2015'

17. In pictogram,  denotes:
    a. Derived shapes
    b. Alternate shapes
    c. Basic shapes
    d. Multi shapes

18. Standard for spatial data types and operators is:
    a. OGIS
    b. SQL3
    c. SQL2011
    d. ISO

19. The 'contains'spatial operation belong to the category of:
    a. Metric operation
    b. Topological operation
    c. Directional operation
    d. Spatial analysis operation

20. The spatial operator ST_Intersection (x, y) fulfills the following criteria:
    a. Returns a geometry that covers all the area covered by geometry x or geometry y
    b. Returns a geometry that covers the area shared by geometries x and y
    c. Returns the geometry type of geometry x
    d. Returns a point guaranteed to be within the boundary of geometry x