

KATHMANDU UNIVERSITY
End Semester Examination
March/April 2017

Marks scored:

Level : B. E.
Year : III

Course : GEOM 318
Semester: I

Exam Roll No:

Time: 30 mins.

F.M. : 10

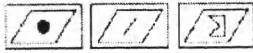
Registration:

Date APR 09 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:
- Strong entities
 - Primary entities
 - Weak entities
 - Primary keys
11. All of the following string notations are accepted in SQL, except:
- '__%'
 - '%__%'
 - '___'
 - '___'"
12. Geometry collection represents complex shapes and are of three types, namely:
- Multipolygon, multiline, multipoint
 - Multipoint, Multicurve, multisurface
 - Polygon, line, point
 - Line, curve, line string
13. The SQL clause that is same as project operator in relational algebra:
- From
 - Where
 - Select
 - Having
14. SDBMS differs from a non-spatial DBMS in all the following, except:
- handle spatial operations with spatial extensions
 - ability to tackle multiuser and transaction issues faced in GIS
 - Usage of spatial indices
 - 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:
- Focal operation
 - Local operation
 - Zonal operation
 - 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?
- SELECT*FROM Apartment HAVING SoldDate>='05/30/2015'
 - SELECT*FROM Apartment WHERE SoldDate<'05/30/2015'
 - SELECT*FROM Apartment GROUPBY SoldDate>='05/30/2015'
 - SELECT*FROM Apartment WHERE SoldDate>='05/30/2015'
17. In pictogram,  denotes:
- Derived shapes
 - Alternate shapes
 - Basic shapes
 - Multi shapes
18. Standard for spatial data types and operators is:
- OGIS
 - SQL3
 - SQL2011
 - ISO
19. The 'contains' spatial operation belong to the category of:
- Metric operation
 - Topological operation
 - Directional operation
 - Spatial analysis operation
20. The spatial operator ST_Intersection (x, y) fulfills the following criteria:
- Returns a geometry that covers all the area covered by geometry x or geometry y
 - Returns a geometry that covers the area shared by geometries x and y
 - Returns the geometry type of geometry x
 - Returns a point guaranteed to be within the boundary of geometry x