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SPECIALIZATION IN CYBER SECURITY (CS)

EXAMINATION : DECEMBER - 2022
SEMESTER – III/V

Sub: Database Management System (DBMS)

(BCA –341-18/341-20/342/BCA-CS-341-20)

Date : 22/12/2022

Total Marks : 60

Time: 10.00 am to 12.30 pm

Instructions:

1. All questions are compulsory unless and otherwise stated.
 2. Bold figures to the right of every question are the maximum marks for that question.
 3. Candidates are advised to attempt questions in order.
 4. Answers written illegibly are likely to be marked zero.
 5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
 6. Draw neat and labelled diagrams wherever necessary.
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Q.1. Fill in the blanks.

(5)

1. DBMS provides an ----- that is both convenient and efficient to use.
 - a) Environment
 - b) Area
 - c) Space
 - d) Data
2. ----- provides fast access to data items that hold particular values.
 - a) Sequence
 - b) Indices
 - c) Key
 - d) Dbms
3. A ----- is an object used to place rules on data.
 - a) Index
 - b) Constraint
 - c) Map
 - d) Data
4. ----- is useful if you have started a transaction that you can not complete.
 - a) Commit
 - b) Rollback
 - c) Update
 - d) Select
5. Various types of authorizations are called -----.
 - a) Commands
 - b) Structure
 - c) Privileges
 - d) Authority

Q.2. State True/False.

(5)

1. The Conceptual level is also known as the community logical level.
2. Data independence is of two types, physical and logical data independence.
3. Each attribute of the column are drawn from the set of values known as domain.
4. Composite attributes are not further divided into subparts.
5. Denormalization does not allow redundancy.

Q.3. Answer the following. (Solve any 5) (10)

1. State the definition of Database Administrator.
2. What is schema ?
3. State the difference between single and multiuser system.
4. What is decomposition ?
5. What is deadlock ?
6. What is Denormalization ?

Q. 4. Answer the following in detail. (Solve any 6) (30)

1. Explain data types in SQL.
2. What are the advantages of normalization ?
3. Explain any 3 Codd's rules.
4. Explain different types of system failures.
5. Explain Wait-die and Wound-wait scheme related to deadlock.
6. Explain the undesirable properties of bad database design.
7. Define transaction. Explain transaction model.

Q. 5. Answer the following in detail.(Solve any 1) (10)

1. Explain in detail 1. Integrity constraints 2. Data security
2. a) Why concurrency control is required ?
b) Explain in detail the problems associated with concurrency.
