

TILAK MAHARASHTRA VIDYAPEETH, PUNE
BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)
SPECIALIZATION IN CYBER SECURITY (CS)

EXAMINATION : JUNE - 2022

SEMESTER - III

Sub: Database Management System (DBMS)

(BCA -341-18/341-20/332/342/BCA-CS-341-20)

Date : 14/06/2022

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.

Q.1. Fill in the blanks.

(5)

1. _____ a database involves specifying the data types ,structures and constraints
 - a) constructing
 - b) defining
 - c) manipulating
 - d) evaluating
2. Semiconductor memory is an example of _____ storage
 - a) non volatile
 - b) volatile
 - c) permanent
 - d) manual
3. In shadow page scheme the memory that is addressed by a process is called _____ memory
 - a) visible
 - b) non visible
 - c) hidden
 - d) virtual
4. In case of locking protocol , _____ lock is also called as update or write lock
 - a) shared
 - b) wait
 - c) exclusive
 - d) cascading
5. In _____ phase of validation techniques various data items are read and stored in temporary local variables
 - a) write
 - b) validation
 - c) read
 - d) lock

Q.2. State True/False.

(5)

1. In single user system, many users can access the database at any given time
2. Data independence is of two types -physical and logical
3. Shadow paging is an alternative to log based recovery
4. Concurrency occurs in single user system
5. In shrinking phase of two phase protocol, number of locks decreases from max to zero

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

(10)

1. List the conventions for drawing ERD
2. What Third normal form(3NF) states ?
3. Write a note on naïve users
4. List data types in SQL
5. What is use of COMMIT and ROLLBACK in SQL ?
6. Write a note on ACID properties

- Q. 4. Answer the following in detail. (Solve any 6) (30)**
1. Explain Entity set and Relationship set
 2. Write a note on Generalization and Specialization
 3. Explain Referential Integrity with example
 4. Explain advantages and disadvantages of Normalization
 5. Explain in detail 'Views in SQL'
 6. Write a note on DML .Also explain commands in it
 7. Write a note on transaction states
- Q. 5. Answer the following in detail. (Solve any 1) (10)**
1. Explain Roll of Database administrator(DBA) in detail
 2. Write a detailed note on codd's rules
-