CB 60:40

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

EXAMINATION: MAY - 2024 SEMESTER – III

Sub: Database Management System (DBMS)

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

Date	: 29/05/2024	Total Marks: 60	Time: 2.00 pm to 4.30 pm
	 Bold figures to the Candidates are at Answers written in Use of scientific control 	compulsory unless and otherwise stat e right of every question are the maxi dvised to attempt questions in order. llegibly are likely to be marked zero. calculators, Log tables, Mollier Chart belled diagrams wherever necessary.	mum marks for that question.
Q.1.	Fill in the blanks.		(5)
1.	Rows of the relation a	are referred to as of the relation	1.
	a) Tuples	b) Fields	
	c) Key	d) Name	
2.	A table is said to be in	n first normal form if it has no repeati	ng groups of
	a) Names	b) Rows	
	c) Attributes	d) Keys	
3.	Entity integrity rule is	s concerned with key values.	
	a) Primary	b) Foreign	
	c) Candidate	d) Super	
4.	Various types of authorizations are called		
	a) Authority	b) Grant	
	c) Privileges	d) Terms	
5.	5 means the number of transactions executed in a		en amount of time.
	a) Reduced time	b) Throughpu	t
	c) Execution	d) Real time	
Q.2.	State True/False.		(5)
1.	A database is collection of interrelated data.		
2.	The relational model is an example of file based model.		
3.	The network model is also called as record based model.		
4.	Access time is the time needed to position the read/write head at the required position.		
5.	Database recovery techniques are the methods of making the database fault tolerant.		

Q.3. Answer the following. (Solve any 5) What is derived attributes? What is integrity constraints? State the definition of DBMS. Which data types are available in SQL? What is deadlock? State the difference between procedural and non procedural DML.

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

(30)

- 1. What are the advantages of DBMS?
- 2. Define normalization and state the advantages of normalization.
- 3. Explain in detail properties of transaction.
- 4. What is failure? Explain different types of failures.
- 5. What is concurrency? Explain any 2 problems associated with concurrency.
- 6. Explain in detail the users of DBMS.
- 7. Explain wait-die and wound-wait schemes related to deadlock.

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

(10)

- 1. Explain in detail ERD.
- 2. Explain in detail components of DBMS.