Total No. of Questions: 6 *Total No. of Printed Pages:3*

Enrollment No.....

Faculty of Management Studies

End Sem (Odd) Examination Dec-2022

MS3ED03 Data Base Management System

Programme: BBA Branch/Specialisation: DM

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1 i. A Database Management System (DBMS) is- **1**

(a) Collection of interrelated data
(b) Collection of data describing one particular enterprise
(c) Collection of programs to access data
(d) All of these

ii. An entity set that does not have sufficient attributes to form a primary key is a **1**

(a) Strong entity set (b) Weak entity set
(c) Simple entity set (d) Primary entity set

iii. The DBMS language component which can be embedded in a program is- **1**

(a) The data definition language (DDL)
(b) The data manipulation language (DML)
(c) The database administrator (DBA)
(d) A query language

iv. The way a particular application views the data from the database that the application uses is a- **1**

(a) Module (b) Relational model
(c) Schema (d) Subschema

v. SET concept is used in- **1**

(a) Network model (b) Hierarchical model
(c) Relational model (d) None of these

P.T.O.

vi. In ER model the details of the entities are hidden from the user. This process is called- **1**
(a) Generalization (b) Specialization
(c) Abstraction (d) None of these

vii. The file organisation that provides very fast access to any arbitrary record of a file is- **1**
(a) Ordered file (b) Unordered file
(c) Hashed file (d) B-tree

viii. What factors would not determine the capacity of a block of a disk organization? **1**
(a) Blocking factor (b) Record size
(c) Block pointer (d) Inter-block gap

ix. For select operation the _____ appear in the subscript and the _____ argument appears in the parenthesis after the sigma. **1**
(a) Predicates, relation (b) Relation, predicates
(c) Operation, predicates (d) Relation, operation

x. Relational algebra is a _____ query language that takes two relations as input and produces another relation as an output of the query. **1**
(a) Relational (b) Structural (c) Procedural (d) Fundamental

Q.2 i. Define the two levels of data independence. **2**
ii. Describe the types of relationships **3**
iii. Describe the types of attributes. **5**
OR iv. Describe the DBMS. Explain the merits and demerits of data base system. **5**

Q.3 i. What is an instance? What is a schema? **2**
ii. What is DBA? Mention the functionalities of DBA. **3**
iii. Mention various DML operations with examples. **5**
OR iv. Explain three level architecture in DBMS. **5**

Q.4 i. What are the major components used in E-R diagram design? **4**
ii. Describe the object oriented model with suitable example. **6**

OR iii. Describe hierarchical data model with suitable example. **6**

Q.5 i. Differentiate volatile and non-volatile storage. **2**
ii. Define the characteristic of disk. **3**
iii. Explain fixed-length records and variable-length records. **5**
OR iv. Write about indexed sequential files with advantages and disadvantages. **5**

Q.6 Attempt any two:
i. Describe the relational query optimization. **5**
ii. Explain the properties of RDBMS. **5**
iii. Consider following relational algebra schema: **5**
STUDENT (RNO, Name, DOB, Percentage, DNO)
DEPARTMENT (DNO, DNAME, HEAD)
Write relational algebra expressions.
(a) Find Student's name and course from Computer Department
(b) Get the Student's name who has percentage greater than 70.

******

Marking Scheme

Data Base Management System(T)-MS3ED03(T)(MBA)

Total No. of Questions: 6 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Management Studies

End Sem (Odd) Examination Dec-2020

Data Base Management System(T)-MS3ED03(T)

Programme: MBA Branch/Specialisation:

Q.1	i	(c) d) All of the option	1
	ii	b) Weak entity set.	1
	iii	b) The data manipulation language(DML)	1
	iv	d) Subschema	1
	v	a) Network Model	1
	vi	c) Abstraction	1
	vii	b) Hashed file	1
	viii	d) Inerblock gap	1
	ix	a) Predicates, relation	1
	x	c) Procedural	1
Q.2	i	Define the two levels of data independence.	2
		Definition 1	
		Diagram 1	
	ii	Describe the types of relationships	3
		Define three Relationships 2	
		diagram of relationship 1	
	iii	Describe the types of attributes.	5
		Attribute describe 2	
		Explain with example and notation 3	
OR	iii	Describe the DBMS. Explain the merits and demerits of data base system.	5
		Definition of DBMS 2	
		Merit and Demerit depend number of differences 3	
Q.3	i	What is an instance? What is a schema?	2
		Define instance 1	
		Explain Schema 1	
	ii	What is DBA? Mention the functionalities of DBA.	3
		Definition of DBA 1	
		Functionality of DBA 2	
	iii	Mention various DML operations with examples.	5
		DML operation 2	
		DML example of it 3	
OR	iii	Explain three level architecture in DBMS.	5
		Explanation Each Layer 3	
		Diagram of Architecture 2	
Q.4	I	What are the major components used in E-R diagram design?	4
		Component name and define 2	
		Diagram of each component 2	
	ii	Describe the object oriented model with suitable example.	6
		Explain about model and notation 3	
		Example of it with diagram 3	
OR	iii	Describe Hierarchical Data Model with suitable example.	6
		Explain about model and notation 3	
		Example of it with diagram 3	
Q.5	i	Differentiate volatile and non volatile storage.	2
		Volatile 1	
		Non-Volatile 1	
	ii	Define the characteristic of Disk.	3
		Number of Characteristic of Disk 3	
	iii	Explain Fixed-Length Records and Variable-Length Records.	5
		Fixed-Length Records 2.50	
		Variable-Length Records 2.50	
OR	iii	Write about indexed sequential Access files Method with advantages and disadvantages.	5
		Definition of indexed Sequential Access definition 1	
		Advantages 2	
		Disadvantages 2	
Q.6			
	i	Describe the Relational Query Optimization	5
		Define properly 5	
	ii	Explain the properties of RDBMS.	5

Explanation of the properties define properly 5

iii Consider following Relational Algebra schema
STUDENT (RNO, Name, DOB, Percentage, DNO)
DEPARTMENT (DNO, DNAME, HEAD)
Write Relational Algebra expressions.
i. Find Student's name and course from Computer Department
2.50
ii. Get the Student's name who has percentage greater than 70
2.50