Name: Student University Roll No.:	Printed Page: 1

School of Engineering
Second Sessional Examination, Even Semester (AS: 2022-23)
B. Tech: CSE [Year: 2nd] [Semester: 4th]

Course Title: Database Management Systems Course Code: BCS3401	Max Marks: 60 Time: 10.00-1.00PM

Instructions if any: Read the question Carefully.

	SECTION 'A' Q.N.1. Attempt all parts of the following:	Course Objective	Marks
a)	What are the functions of DBMS?	CO1	1
b)	What do you understand by Functional Dependency in DBMS?	CO1	1
c)	Explain Blind Write in Transactions.	CO4	1
d)	What is Normalization?	CO4	1
e)	Define schedule?	CO4	1
f)	What is the concept of Roll Back in Transaction?	CO4	1
g)	Give examples for one to one and one to many relationships?	CO2	1
h)	Define the Starvation with an example?	CO4	1

	SECTION 'B' Q.N.2. Attempt any two parts of the following:	Course Objective	Marks
a)	Define the term DBMS? What are the advantages of DBMS over a traditional file System?	CO1	6
b)	Draw the ER-Diagram for University?	CO7	6
c)	Explain Concurrency Control. Why it is needed in the database system?	CO4	6
d)	Discuss about ACID properties with examples.	CO4	6

	SECTION 'C' Q.N.3. Attempt any two parts of the following:	Course Objective	Marks
a)	Explain the differences between physical level, conceptual level and view level of data abstraction?	CO2	5
b)	Discuss about Generalization, Specialization.	CO5	5
c)	Explain the concept of Multiple Granularity? Also discuss Multi-version Schemes?	CO6	5
	Q.N.4. Attempt any two parts of the following:		
a)	Discuss about the States of Transactions.	CO4	5
b)	Explain the concept of Lossless & Lossy concept in DBMS.	CO4	5
c)	Define Key. Explain various types of keys?	CO2	5
	Q.N.5. Attempt any two parts of the following:		
a)	Write about Conflict & View Serializability.	CO5	5
b)	Compare and contrast the differences between File Processing System and DBMS.	CO6	5
c)	Discuss log based recovery process? Briefly	CO3	5
	Q.N.6. Attempt any two parts of the following:		
a)	What are data models? Briefly explain different types of data models.	CO2	5
b)	Define 2NF with Example? What are the differences between 3NF and BCNF?	CO7	5
c)	What do you mean by Serializability? Discuss the conflict and view serializability with suitable example.	CO3	5

Table 1: Mapping between COs and questions
(Number of COs may vary from course to course)

COs	Questions Numbers	Total Marks
CO1	1(a,b),2(a),5(b)	8
CO2	1(g),3(a),4(c),6(a)	16
CO3	5(c),6(c)	10
CO4	1(c,d,e,f, h), 2(c,d),4(a,b)	27
CO5	3(b),5(a)	10
CO6	5(b),3(c)	10
CO7	6(b),2(b)	11