

Total No. of Questions – [6]

Total No. of Printed Pages: 2

G.R. No.	
----------	--

DECEMBER 2021 - ENDSEM EXAM
S. Y. B. TECH. (AI&DS) (SEMESTER - I)
COURSE NAME: Database Management System
COURSE CODE: ADUA21204
(PATTERN 2020)

Time: [1Hr]

[Max. Marks: 30]

(*) Instructions to candidates:

- 1) Answer Q.1 OR Q.2, Q.3 OR Q.4, Q.5 OR Q.6.
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Question No.	Question Description	Marks
Q.1 a	Discuss the properties of transactions in DBMS.	[4]
Q.1 b	Express your views on conflict serializability. Apply the concept of conflict serializability to below mentioned scenario to check whether the given schedule is serializable or not.	[6]

Consider T_1 , T_2 and T_3 transactions in schedule s_1 , R -Read operation and W- Write Operation

T_1	T_2	T_3

R(A)		R(C)
	R(A)	
	R(B)	
W(B)		W(A)
		W(C)

OR

- Q2 a Discuss the importance of Query Optimization. [4]
Q2 b Discuss Log-Based recovery and list its types with appropriate example. [6]

- Q.3 a Justify Speedup and Scale up factors for parallel databases with suitable example. [4]
Q.3 b Categorize the types of Failures in Distributed database system. [6]

OR

- Q.4 a Interpret the concept of Concurrency control in distributed database. [4]
Q.4 b Discuss design strategies of distributed database in detail. [6]
Q.5 a Compare Structured and Unstructured data. [4]
Q.5 b Express the importance of HDFS and MapReduce in Hadoop. [6]

OR

- Q.6 a Interpret the concept of Big Data with volume, velocity and variety related to Big data. [4]
Q.6 b Discuss CAP theorem and BASE Properties in detail. [6]
(*) Course coordinator can change instructions as per course requirement

*****Best of Luck*****