

Central Tribal University of Andhra Pradesh

Semester End Examination – November-2024

Name of the Program : B.Sc. Artificial Intelligence
(Honours/Honours with Research)
Name of the Subject : Database Management Systems
Subject Code : BAI202 Credits:3 Semester : III
Max Time : 3 Hrs Max. Marks: 70

Part-A

Answer all ten questions. Each question carries 1 mark each (10x1 = 10M)

1. Define DBMS
2. List the objectives in establishing database
3. What degree of relationship set ?
4. List the objectives of Relational Model
5. Define Relational Calculus?
6. Define Nested Query with its syntax?
7. Define Data Redundancy?
8. What does the ACID property stand for?
9. What is shadow database scheme?
10. What is concurrent execution in DBMS?

Part-B

Answer any four questions. All questions carry 5 marks each. (4x5 = 20M)

11. Distinguish between File Systems vs DBMS
12. Explain about E-R Diagram and express mapping cardinality constraints in the relationship
13. Explain the following queries with suitable examples
a) create b) alter c) insert
14. List the primary operations of relational algebra with syntax.
15. Explain about aggregation operators/functions in DBMS with suitable examples.
16. Explain the ACID properties of a transaction in DBMS with an example of how each

Part-C

Answer any four questions. All questions carry 5 marks each. (4x10 = 40M)

17 A) List and Explain different types of Data Models in DBMS

OR

17 B) Construct ER Diagram for a hospital with a set of patients and a set of doctors associated with each patient a log of the various the various tests and examinations conducted

18 A) Explain the following SQL commands with syntax and examples

i) Data Definition Language

ii) Transaction Control Language

OR

18 B) Explain about different views in DBMS with suitable queries

19 A) Explain the following with suitable examples

i) UNION Operator ii) INTERSECT Operator iii) EXCEPT Operator

OR

19 B) List different types of normal forms in DBMS with suitable examples

20 A) Describe the different states of a transaction in DBMS with a state transition diagram

OR

20 B) Explain about shadow database schema with suitable example

*****ALL THE BEST*****