

4. (a) What is the significance of Data base Environment?
Explain with a proper diagram 7+2=9
- (b) What do you mean by attributes? How many types of attributes are there? 5

UNIT - III

5. (a) Describe the basic structure of Oracle system with proper diagram. 8
- (b) What is Normalization? explain the concept of BCNF 6
6. With diagrams illustrate different architectures of centralized DBMS and client-server architecture. 14

UNIT - IV

7. Given a relation R(A,B,C,D) and functional dependency set $FD = \{AB \rightarrow CD, B \rightarrow C\}$, determine whether the given R is in 2NF? If not convert it into 2NF. 14
8. (a) What is Transaction Processing? Explain in details. 7
- (b) What are desirable properties, schedules and states of transaction? 7

UNIT - V

9. Describe what is 3rd NF with help of an example. 14
10. (a) What are the different types of Failures? 6
- (b) Explain the various recovery techniques. 8

UG EVEN SEMESTER (CBCS) EXAMINATION, SEPTEMBER - 2021

COMPUTER SCIENCE

4th Semester

COURSE NO. MCSCC - 403

(Data Base Management System)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

(Answer any five questions, taking one from each unit)

UNIT - I

1. (a) What are the components of a DBMS 5
- (b) With proper examples explain data abstraction and data integration 9
2. Write short notes on: 7+7=14
- (i) The Three Schema Architecture (with diagram)
- (ii) Data Independence

UNIT - II

3. Draw E-R diagram of a hospital management system with a special wing for covid treatment facility. 14