

SANT GADGE BABA AMRAVATI UNIVERSITY
BACHELOR OF ENGINEERING SEMESTER VI (CGS) EXAMINATION S-2020

H.V.P.Mandal's College of Engineering and Technology, Amravati
Department Of Mechanical Engineering

Academic Session:2019-2020

Semester : VI

Unit : I,II,III,IV,V,VI

Date /10/2020

Subject Name : Database Management System

Subject Code :

Max Marks 20

Note: Solve any 2 questions out of 4 questions.

All Questions Carry Equal Marks.

- Q1 a) Explain the benefits of the database system. **3Marks**
b) Write and explain the functions and responsibilities of DBA. **3 Marks**
c) Explain with suitable example following operations of relational algebra:
(i) Selection (ii) Projection (iii) Union **1 Marks**
d) Explain (1) Foreign key (2) Primary key **1 Marks**
e) What is data Model? Explain the different types of data Models? **1 Marks**
f) Construct an E - R diagram for a car insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. **1 Marks**
g) Explain the (1) Database languages **1 Marks**
- Q2 a.) Explain with neat sketch of various components of Database system. **3 Marks**
b) Explain DBMS with its various view levels. **3 Marks**
c) Explain the following clause with example. i] SELECT ii] FROM iii] WHERE **1 Marks**
d) Explain (1) Weak entity set **1 Marks**
e) Explain the (1) Constraints **1 Marks**
f) Explain (1) Mapping cardinality **1 Marks**
- Q3 a.) Define (i) Entity (ii) Entity Set (iii) Attribute (iv) Relation **3 Marks**
b) Explain E-R diagram Notations with Banking Database example. **3 Marks**
c) Explain the following operations in SQL with the help of suitable example. **1 Marks**
i] Insert ii] Update
d) What is a Transaction? **1 Marks**
e) What is Serializability? **1 Marks**
f) Explain the distinction between serial schedule and serializable schedule. **1 Marks**
- Q4 a) Construct an E-R diagram for a hospital with a set of patients and a set of medical doctors. Associated with each patient a log of the various test and examinations conducted.
Entity set Attributes **1 Marks**
Patients Patient_ID, Patient_Name, Patient address
Doctors Doctor_ID, Doctor_Name, Doctor_qualification, Doctor_time
Tests Test_ID, Patient_ID, Test_Name, Date
b) Explain Primary key. **1 Marks**
c) Explain the different SQL Aggregate Functions. **1 Marks**
d) Explain (1) Key (2) Candidate key **1 Marks**
e) What is Cascade less Schedule? **1 Marks**
f) Explain the different states of a transaction. **1 Marks**