Sample Paper

Advanced Database Management System(IT601)
MCA 1st Sem.

[Max Marks: 70]

Note: Attempt Questions from all sections as directed.

Section A - Attempt any Two questions out of Four. Each question carries 7.50 marks. [15 Marks]

Question No: 1

What is the main algorithm used in query processing, explain in detail?

Question No: 2

Differentiate between Specialization and Generalization with example.

Question No: 3

Describe spatial database and explain the applications of spatial database in present life?

Question No: 4

What is multilevel transaction and describe the use multilevel transaction on saga?

Section B - Compulsory Questions. Each question carries 7.50 marks. [15 Marks]

Aim: XYZ hospital is a multi specialty hospital that includes a number of departments, rooms, doctors, nurses, compounders, and other staff working in the hospital. Patients having different kinds of ailments come to the hospital and get checkup done from the concerned doctors. If required they are admitted in the hospital and discharged after treatment. The aim of this case study is to design and develop a database for the hospital to maintain the records of various departments, rooms, and doctors in the hospital. It also maintains records of the regular patients, patients admitted in the hospital, the check up of patients done by the doctors, the patients that have been operated, and patients discharged from the hospital.
Description: In hospital, there are many departments like Orthopedic, Pathology, Emergency, Dental, Gynecology, Anesthetics, I.C.U., Blood Bank, Operation Theater, Laboratory, M.R.I.,

Neurology, Cardiology, Cancer Department, Corpse, etc. There is an OPD where patients come and get a card (that is, entry card of the patient) for check up from the concerned doctor. After making entry in the card, they go to the concerned doctor's room and the doctor checks up their ailments. According to the ailments, the doctor either prescribes medicine or admits the patient in the concerned department. The patient may choose either private or general room according to his/her need. But before getting admission in the hospital, the patient has to fulfill certain formalities of the hospital like room charges, etc. After the treatment is completed, the doctor discharges the patient. Before discharging from the hospital, the patient again has to complete certain formalities of the hospital like balance charges, test charges, operation charges (if any), blood charges, doctors' charges, etc. Next we talk about the doctors of the hospital. There are two types of the doctors in the hospital, namely, regular doctors and call on doctors. Regular doctors are those doctors who come to the hospital daily. Calls on doctors are those doctors who are called by the hospital if the concerned doctor is not available.

Question No: 1

Write the relational database schema of Hospital management case study.

Question No: 2

What is normalization? Normalize the database design created in Q1.

Section C - Compulsory Questions. Each question carries 2.00 marks. [40 Marks]

Question No: 1

A distributed database has which of the following advantages over a centralized database?
A. Software cost
B. Software complexity
C. Slow Response
D. Modular growth

Question No: 2

A transaction manager is which of the following?
A. Maintains a log of transactions
B. Maintains before and after database images
C. Maintains appropriate concurrency control
D. All the above

Question No: 3

Location transparency allows for which of the following?
A. Users to treat the data as if it is at one location
B. Programmers to treat the data as if it is at one location
C. Managers to treat the data as if it is at one location
D. All of the above.

Question No: 4

A heterogeneous distributed database is which of the following?
A. The same DBMS is used at each location and data are not distributed across all nodes.
B. The same DBMS is used at each location and data are distributed across all nodes.
C. A different DBMS is used at each location and data are not distributed across all nodes.
D. A different DBMS is used at each location and data are distributed across all nodes.

Question No: 5

Some of the columns of a relation are at different sites is which of the following?
A. Data Replication
B. Horizontal Partitioning
C. Vertical Partitioning
D. Horizontal and Vertical Partitioning

Question No: 6

Storing a separate copy of the database at multiple locations is which of the following?
A. Data Replication
B. Horizontal Partitioning
C. Vertical Partitioning
D. Horizontal and Vertical Partitioning

Question No: 7

A semijoin is which of the following?
A. Only the joining attributes are sent from one site to another and then all of the rows are returned.
B. All of the attributes are sent from one site to another and then only the required rows are returned.
C. Only the joining attributes are sent from one site to another and then only the required rows are return.

Question No: 8

The data warehousing and data mining technologies have extensive potential applications in the govt in various central govt sectors such as :
A. Agriculture
B. Rural Development
C. Health and Energy

D. all of the true

Question No: 9

ODS Stands for
A. External operational data sources
B. operational data source
C. output data source
D. none of the above

Question No: 10

What is true about data mining?
A. Data Mining is defined as the procedure of extracting information from huge sets of data
B. Data mining also involves other processes such as Data Cleaning, Data Integration, Data Transformation
C. Data mining is the procedure of mining knowledge from data.
D. All the above

Question No: 11

The mapping or classification of a class with some predefined group or class is known as?
A. Data Characterization
B. Data Discrimination
C. Data Set
D.Data Sub Structure

Question No: 12

“Efficiency and scalability of data mining algorithms” issues comes under?
A. Mining Methodology and User Interaction Issues
B. Performance Issues
C. Diverse Data Types Issues
D. None of the above

Question No: 13

What is the use of data cleaning?
A. to remove the noisy data
B. correct the inconsistencies in data
C. transformations to correct the wrong data.
D. All of the above

Question No: 14

What does XML stand for?
A. eXtra Modern Link
B. eXtensible Markup Language
C. Example Markup Language
D. X-Markup Language

Question No: 15

Is it easier to process XML than HTML?
A. Yes
B. No
C. Sometimes
D. Can't say

Question No: 16

Well-formed XML document means
A. it contains a root element
B. it contains an element
C. it contains one or more elements
D. must contain one or more elements and root element must contain all other elements

Question No: 17

XML uses the features of
A. HTML
B. XHTML
C. VML
D. SGML

Question No: 18

What does DTD stand for?
A. Direct Type Definition
B. Document Type Definition
C. Do The Dance
D. Dynamic Type Definition

Question No: 19

Inconsistant Data is_____
A.Structured Data
B.Un Structured Data
C.semi Structured Data
D.Quasi Structured Data

Question No: 20

Precies and steady format data is____
A. Structured Data
B.UnStructured Data
C.semi Structured Data
D.Quasi Structured Data