Model Question

TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

2015

Full Marks: 40
Time: 2 hrs.

BIM / Fourth Semester / IT 218: Data Structure and Algorithm with Java

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

1. Brief Answer Questions: ***[10 × 1 = 10]***

i. What is data structure?
ii. How doubly linked list differs from singly linked list?
iii. Differentiate between stack and queue.
iv. What is splaying?
v. What do you mean by bucket Addressing?
vi. What is average case complexity of algorithm?
vii. What is adjacency matrix of graph?
viii. What is heap?
ix. What is tail recursion?
x. What is skip list?

Group "B"

Exercise Problems: ***[5 × 4 = 20]***

2. Write Depth first traversal for graph.
3. Write a function in Java for insertion sorting.
4. Write a function in Java to insert a node in Binary Search tree.
5. Write a Java class to implement stack with push and pop functions.
6. Write a function in Java to delete element from a hash table.

Group "C"

Comprehensive Questions: ***[2 × 5 = 10]***

7. What are the advantages of B tree? Explain procedure to insert element in a B tree.
8. Explain quick sorting with an example.

*(**Note:** The students should not limit themselves to the chapters mentioned in this Model Questions as questions can be asked from any chapter (within the syllabus) in the examination.)*

Model Question

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BIM / Fourth Semester / IT 219: Web Programming - II

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

1. Brief Answer Questions: ***[10 × 1 = 10]***

i. What is PHP?
ii. Which function of PHP is used to display length of string?
iii. Write syntax of while..loop?
iv. What is array?
v. Write one advantage of writing functions.
vi. How will you access value passed by user using web form?
vii. Which PHP function is used to connect mysql database?
viii. How is cookie set in PHP?
ix. What is CSV file?
x. How will you display current date in a web page using PHP statement?

Group "B"

Exercise Problems: ***[5 × 4 = 20]***

2. Write a program to create a session and storing two session variables.
3. Write program to display calendar in web page. Take month and year from user.
4. Write a program to insert a record into database (make your assumptions about database, user, attributes of table etc.
5. Write a function takes two numbers as parameter and display five numbers greater than second parameter and five numbers less than first parameter.
6. Write a program in PHP to read and display content of a CSV file? (make your own assumptions about CSV file)

Group "C"

Comprehensive Questions: ***[2 × 5 = 10]***

2. What is session? Explain importance of maintain session with example.

3. What do you mean by form processing? Explain.

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Model Question

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2015

Full Marks: 40
Time: 2 hrs.

BIM / Fourth Semester / IT 220: Database Management System

Candidates are required to answer all the questions in their own words as far as practicable.

Group "A"

1. Brief Answer Questions: ***[10 × 1 = 10]***

i. What is data abstraction?
ii. State second normal form.
iii. What is data independence?
iv. What is weak entity set?
v. List all the SQL aggregate function?
vi. How can you display common records of two tables using SQL statements?
vii. How is referential integrity created in database?
viii. What do you think why records of database are locked while updating database?
ix. What is relational database?
x. What do you mean by atomicity?

Group "B"

Exercise Problems: ***[5 × 4 = 20]***

2. Write SQL statements to create following tables:

   Employee(<u>eid</u>, ename, dob); department(<u>dname</u>, <u>eid</u>)

   Here

Attribute	Data Type
Eid	Integer
Ename	Text
Dob	Date
Dname	text

3. Consider Following tables: employee(eid, ename, dob) and department(dname, eid)
   - ✓ Write SQL statement to display name of all employees working in finance department
   - ✓ Write SQL statement to display number of employees in each department

4. Write a schedule to show how database is reached inconsistent state when two concurrent transactions accessing same data element execute at the same time.

5. Make E-R diagram after reading following passage:

   Students enroll in college, college hires teachers to teach different course to the students. Students appear in exam. Teachers evaluate exam of each student and publishes obtained marks by each student.

6. Explain any one database recovery algorithm.

Group "C"

Comprehensive Questions: ***[2 × 5 = 10]***

7. Why database tables need to be normalized? Explain with example.

8. Why are views of tables created? Explain with example.

(***Note:*** *The students should not limit themselves to the chapters mentioned in this Model Questions as questions can be asked from any chapter (within the syllabus) in the examination.)*