Centre for Promotion of Knowledge and Languages
Semester 2, 2009/2010 Academic Session

Examination Questions Paper

Course Code	:	**PG 3105**
Course Name	:	**Database Applications**
Course Level	:	**First Degree**
Time	:	**2 hours**

Note (s):
1 There are 2 sections in this examination paper. Section A and Section B.
2 Attempt **all questions in Section A**. Indicate your answer for Section A with the **question number** by writing either **a,b,c or d** for the correct answer.
3 Choose **only ONE (1) question** from **Section B**.
4 You may use diagrams, tables and examples for illustration to support your answers.
5 Write clearly the Section and Question number in your answer booklet.

بسم الله الرحمن الرحيم

(Section A) - *Answer all questions from this section (20 marks).*

1. You are designing a schema for a bookstore that will contain with columns for Author's last name, book price, and quantity on hand. The last name can be up to 30 characters in length. Prices will range from 1.00 to 299.99. The quantity on hand can vary from 0 to 100. What data types provide the best match for these columns?

   a. text, decimal(5,2), and numeric(1,100)
   b. text, decimal(3,2), and tinyint unsigned
   c. varchar(30), decimal(5,2), and unsigned
   d. varchar(30), decimal(5,2), and tinyint unsigned

2. Which of the following statements will remove a database named yourworld?

   a. DELETE DATABASE yourworld
   b. DROP DATABASE yourworld
   c. REMOVE DATABASE yourworld
   d. TRUNCATE DATABASE yourworld

3. Pick the statement from the following that will list all the tables in the current database:

   a. DISPLAY ALL TABLES
   b. SELECT TABLES
   c. SHOW TABLES
   d. ls -l

4. Which of the following commands will discard the data and structure of a table named parts?

   a. TRUNCATE TABLE parts
   b. DROP TABLE parts
   c. DELETE TABLE parts
   d. REMOVE TABLE parts

5. Which command will add a char(30) column to be named GPScoordinates to the existing table addresses?

   a. CREATE COLUMN GPScoordinates char(30) IN addresses
   b. INSERT INTO addresses COLUMN GPScoordinates char(30)
   c. ALTER TABLE addresses INSERT GPScoordinates char(30)
   d. ALTER TABLE addresses ADD GPScoordinates char(30)

6. A table may have how many PRIMARY KEYs?

    a. One PRIMARY KEY at most
    b. Exactly one PRIMARY KEY must be defined
    c. At least one PRIMARY KEY must be defined
    d. There may be one PRIMARY KEY per column

7. What is the main reason for indexing tables?

    a. Only index columns may be used in searches
    b. Indexes enforce the referential integrity of a table
    c. Indexes can speed up the execution of queries
    d. Indexes make table maintenance execute more quickly

8. The following output describes the pets table:

```
+------------+----------------+------+-----+---------+-------+
| Field      | Type           | Null | Key | Default | Extra |
+------------+----------------+------+-----+---------+-------+
| Name       | char(35)       | NO   | PRI |         |       |
| ColorCode  | char(3)        | NO   | PRI |         |       |
| Address    | char(40)       | YES  |     | NULL    |       |
+------------+----------------+------+-----+---------+-------+
```

Which of the following statements will return all the rows in this table?

    a. SELECT * FROM pets
    b. SELECT ALL FROM pets
    c. SELECT FROM pets ALL FIELDS
    d. RETURN ALL FROM pets

9. The table books has a column named price. Which of the following commands will remove rows where price is less than 200?

    a. DROP books WHERE price < 200
    b. DROP FROM books WHERE price < 200
    c. DELETE FROM books WHERE price < 200
    d. DELETE (SELECT * FROM books WHERE price < 200)

10. PHP server scripts are surrounded by delimiters, which?

    a.   <?php>...</?>
    b.   <&>...</&>
    c.   <script>...</script>
    d.   <?php...?>

11. How do you write "Ahlan Washalan - Welcome - Selamat Datang" in PHP

    a.   "Ahlan Washalan - Welcome - Selamat Datang";
    b.   echo "Ahlan Washalan - Welcome - Selamat Datang";
    c.   Document.Write("Ahlan Washalan - Welcome - Selamat Datang");
    d.   type "Ahlan Washalan - Welcome - Selamat Datang";

12.   All variables in PHP start with which symbol?

    a.   &
    b.   !
    c. $
    d.   #

13.   What is the correct way to end a PHP statement?

    a.   ;
    b.   </php>
    c.   New line
    d.   .

14.   How do you get information from a form that is submitted using the "get" method?

    a. $_POST[]
    b.   Request.Form;
    c.   Request.QueryString;
    d. $_GET[];

15. What is a correct way to add a comment in PHP?

    a.   /*...*/
    b.   *\..*
    c.   <comment>...</comment>
    d.   <!--...-->

16.   Which one of these variables has an illegal name?

    a. $my_Var
    b. $my-Var
    c. $myVar
    d. $myVar1

17. What is the correct way to include the file "time.inc" ?

    a.   <% include file="time.inc" %>
    b.   <?php include("time.inc"); ?>
    c.   <!--include file="time.inc"-->
    d.   <?php require("time.inc"); ?>

18. What is the correct way to create a function in PHP?

    a.   new_function myFunction()
    b.   create myFunction()
    c.   function myFunction()
    d.   new myFunction(create)

19.   What is the correct way to connect to a MySQL database from a local server?

    a.   mysql_connect("localhost");
    b.   dbopen("localhost");
    c.   mysql_open("localhost");
    d.   connect_mysql("localhost");

20.   What is the correct way to add 1 to the $count variable?

    a.   ++count
    b. $count =+1
    c. $count++;
    d.   count++;

Section B. Answer ONLY 1 questions from this section (10 marks).

Question 1.

a. How do you back up the tables City and Country from the world database into the file c:\worldbackup.sql using a single mysqldump command?
b. Write down the SQL to list 10 records from the table City.
c. Write down the SQL to list the records where the countrycode is "Brunei" from the Country table.
d. List out the records from Country table where the population field in the country table is between 100000 and 500000.

e. Assume that you have the following tables in the project database:

```
mysql> SHOW TABLES;
+-------------------+
| Tables_in_project |
+-------------------+
| auth              |
| lang              |
| project           |
+-------------------+
3 rows in set (0.00 sec)
```

You have backed up all tables in that database as follows:
shell> mysqldump project --tab=/tmp

Someone accidentally dropped the project database. Using MySql (and no other program), what statements do you have to issue to restore the database and its tables?

(10 marks)

Question 2.

Identify the 3 components of the database management development environment using the WAMP environment. For each of the component describe the functionality of the components.

(10 marks)

Question 3.

a. Describe and illustrate the following terms;
      1. INTERNET
      2. Browser
      3. Web server
      4. Protocol
      5. SQL statement

(5 marks)

b. In the context of database, what are the difference between the following terms. Describe and illustrate with examples.
      a. DBMS
      b. DDL
      c. DML

(5 mark)

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