



MTS CERTIFICATION

Business Intelligence Programming Certificate

A member of BTC, US Based Company of African Diaspora Marketplace, Finalist ADM II

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BIPC - 2017 - 10

MTS - BIPC II

ERP BI DBA

3 Hours

Business Intelligence Programming Certificate ERP BI Database Administration

Exam ID: 2017-03

3 Hours

Instructions

Answer FOUR questions only

You are reminded of the importance of clarity of expression and orderly presentation of the codes.

You can use any of the following SQL Engines/Applications:

Oracle SQL

MS SQL Server

PowerEngine

MySQL

PL/SQL Developer

NB: Make sure you state the type of engine or applications you are using to interpret/compile your SQL Scripts.

Question 1

You have been employed by Citi Bank and the following transactions have been given to you

22th March 2013

- James Brown deposited \$ 900 to his account
- George Cliff deposited \$ 500 to his account
- Christian Obiang withdrew \$ 700 from ATM
- Alfred Kodjo deposited \$ 1200 to his account

On the 23rd March 2013

- James Brown withdrew \$ 300 from his account
- George Cliff bought some items with visa card from the internet \$ 250
- Christian Obiang paid a cheque of \$ 500 to his account
- Alfred Kodjo withdrew \$ 300 from his account

Required:

1. Create a BankTrans table with the fields(StartDate, Description, Customer, Deposit, Withdrawal)
2. Calculate the total deposits and withdrawals for each customer with PL/SQL View
3. Write another view to prepare summary totals of deposits and withdrawals report for the central bank

Question 2

Motorola is implementing the Overall Equipment Efficiency to manage the production floor performance. You have been employed by the company to manage the database and to produce the OEE Reports.

MC_ID	ProductName	GoodNos	Target	Reject	Operating time	Down Time
01_3	Android Phones	10690	12870	200	23	1
02_40	Iphone	20245	15400	300	22	2
03_10	Radio Phones	30200	25240	120	24	0
04_17	Bateries	10670	9500	400	23	1

Write a procedure that will produce the following reports:

1. Quality Efficiency Report
2. Machine Efficiency Report
3. Time Efficiency Report
4. Overall Equipment Efficiency Report

Question 3

Explain the procedure below including all statements and keywords

```
CREATE OR REPLACE PROCEDURE Load_ab_Emp AS
countrows number;
BEGIN
  Insert into absent
  Select trunc(sysdate), Empid
  from employees
  where empid not in
  (
  select empid from attendance where attdate = trunc(sysdate));

  if SQL%FOUND then
    countrows := SQL%ROWCOUNT;
    commit;
    insert into totalabsent select trunc(sysdate), countrows from dual;
    commit;
  elsif SQL%NOTFOUND then
    rollback;
  end if;
End;
```

Question 4

Yearly_Holiday

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YHDate	Description
01/01/2011	New Year
03/06/2011	Independence
05/01/2011	May Day
25/05/2011	AU Day
14/04/2011	Easter Friday
17/04/2011	Easter Sunday
31/07/2011	Eid Fitr
31/08/2011	Eid Alda
21/09/2011	Founders Day
12/02/2011	Farmers Day
25/12/2011	X mas Day
26/12/2011	Boxing Day

Request 1: Create the Yearly_Holiday table and insert the holidays

Request 2: Extract the yearly holidays attendance using the Yearly_Holiday table and Attendance table

Request 3: Write a set of codes to calculate the Yearly_Holiday pay . The report looks like the template below:

EmpID	Name	YholiDays	DailyRate	Hourlyrate	ActTotalHrs	Yearly_holiday_Pay
002	Gordon Lindsay	1	47.00	5.87	11.7	68.73
001	James Brown	1	36.00	4.5	12.16	54.75

Question 5

The daily hours worked by employees of SRG Industries are tabulated below:

Table: EmployeesHoursWorked

EmployeeID	Hours_Worked	Hourly_Pay (ghc)	WorkDate
SRG124	12	10.5	10-JAN-2012
SRG415	13	11.2	10-JAN-2012
SRG564	8	12.7	10-JAN-2012

1. Write SQL code to calculate the:
 - a. Normal Pay and,
 - b. Normal Overtime Pay

Question 6

1. What is Data Mining?
2. How can the banking industry use Data Mining for
 - a. customer segmentation and profitability,
 - b. credit scoring and approval
 - c. Predicting Payment default
 - d. Detecting fraudulent transaction

Question 7

Write short notes on the following:

1. PL/SQL Variables
2. For..Loop
3. While ...Loop
4. Explicit Cursor
5. Implicit Cursor

Illustrate your answers with codes