



Missionsoft Testing Service

International IT Examinations Council
For Database Programmers, Systems Developers,
MIS Engineers and ICT Professionals

MISCERT0011-APR 2012
MTS II-TEL MIS ENG
TELECOM DBA 1
3 Hours

Missionsoft Testing Service

Level 2

MTS Certified Telecom MIS Engineers

Telecom Database Administration 1

April 2012

3 Hours

Instructions

Answer four questions including Question 1

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 (VB SQL)
- MySQL
- PL/SQL Developer

NB: Make sure you state the type of engine or applications that can interpret/compile your SQL Scripts. One hour extra is allocated to online students for downloading questions, and attaching answers and send. Answers should be in Microsoft Word documents

Question 1 carries 40 marks and any other question carries 20 marks

Question 1

You have been employed by Airtel Ghana. On your first day, you have been given two tables: Subscribers and Voice_CDR tables. The tables are listed below

Subscribers

=====

Sub_Name	Sub_No	Sub_Cat	Reg.Date	MNP
john Anderson	0266000350	pRepaid	10/23/2011 10:32:56	711
roger Banson	0265412852	postpaid	10/23/2011 12:30:40	711
simeon Hude	0367412000	PREPAID	10/24/2011 14:25:35	711

VOICE_CDR

=====

Startdate	ANO	BNO	Cost	Ded_Accused	Duration	Teleservicecode
1/1/2012 10:02:10	0266000850	0276000550	5		421	0
1/2/2012 14:02:10	0266000895	0206000850	2		128	7
1/4/2012 10:02:10	0266000400	0266000660	3		352	0

A) Write the codes that will:

- 1) Create the subscribers table above.
- 2) Insert these three records into the table subscribers
- 3) Display prepaid subscribers
- 4) Display subscribers registered on 23-Oct-2012
- 5) Display mobile line subscribers
- 6) Display fixed line subscribers
- 7) Display all subscribers in capital letters
- 8) Display all subscribers with first name capital
- 9) Display all subscribers in lowercase
- 10) Change john Anderson phone number to 0266000345

B) Write the codes that will:

1. display all the prepaid voice on net calls
2. create view to compute unique subscribers off net activities displaying rptdate, msisdn, offnetcount, offnet_revenue and offnet_mou

Question 2

AT Telecom has received the following payments from its postpaid subscribers. The payments are tabulated into the **incomingpayments** table below

IncomingPayments

Sub_Name	Sub_No	Amount	DatePaid
Justice Ninson	0268000345	40	12-Nov-2010
Maamee Serwaah	0260000857	15	16-Nov-2010
Justice Ninson	0268000345	20	18-Nov-2010
Maamee Serwaah	0260000857	50	22-Nov-2010
Roger Banson	0265412852	60	22-Nov-2010
Maamee Serwaah	0260000857	45	30-Nov-2010

Write the SQL code that will produce this report:

Sub_No	Total	numberofpayment	Highestpayment
0268000345	60	2	40
0260000857	110	3	50
0265412852	60	1	60

Question 3

1. List the Fields of Application of MTS Training in Database Administration
2. List the basic services and valued added services of telecom companies
3. Write the appropriate codes:
 - a. to create user james with password jms? Grant the following permissions to him: connect, resource, create session, create table, create view to james
 - b. Revoke the privilege you granted to james and grant to him the database administrator privilege.
4. Explain the following terms that are used interchangeably in Information Management: Data Mining, Database Administrators, Data Warehouse Administrators, and MIS Engineers

Question 4

1. Create a table receipt with the fields(SubNo, amount)
2. Create table subscribers (SubscriberName, SubscriberNo)
3. Add columns paymentdate and SubscriberNo to receipt table and delete the column SubNo
4. Create unique index on the table receipt using the field SubscriberNo
5. create a primary key on the table subscribers and a foreign key on the table receipt using the field SubscriberNo

Question 5

SMS_CDR	Startdate	ANO	BNO	Cost	Ded_Accused	Duration	Teleservicecode
	1/1/2012 10:02:10	0266000850	0206000112	2		240	4
	1/2/2012 14:02:10	0266000895	0546000224	.87		120	4
	1/4/2012 10:02:10	0266000400	+229972311646	1.6		210	4

1. Write a procedure that will load into a sms_activity table the unique subscribers daily international sms. The sms_activity will have the fields: rptdate, msisdn, intcount, int_revenue
2. Create a unique index on the sms_activity table.

Question 6

Explain briefly ten of the keywords below and illustrate with codes

1. To_Char
2. To_Date
3. To_Number
4. Trim
5. Length

6. Lower
7. Upper
8. Trunc
9. Sum
10. Min
11. Max
12. Count
13. Format
14. Cdbl
15. Cdate
16. Len
17. Ucase
18. Lcase
19. Group by
20. Order by
21. Pivot
22. Union
23. Inner Join
24. Mid
25. Substr

Question 7

Write short notes on the following:

1. Mobile Number Portability
2. Tele service code
3. Traffic Case
4. CDR
5. IN
6. GPRS
7. SMS-MO
8. SMS-MT
9. MSISDN
10. MSC

Question 8

Immediately after your MTS exam in Telecom Database Administration, you've got job at Airtel Ghana. The Telecom Business Operations Manager has given you these two reports to produce from the subscribers table which has only two columns (Subscriber_Name and Subscriber_Number). Airtel has two types of numbers: Mobile line starts with 026 while fixed line starts with 03 with 7 as fourth character. The Report templates are as follows

Standard_Subs_view

=====

Subscriber_Name	Subscriber_Number	Type
James Addo	0266000528	Mobile
Badoo Banson	0357251445	Fixed
David Boateng	0367445789	Fixed

Classic_Subs_View

=====

Subscriber_Name	Mobile	Fixed
James Addo	0266000528	-
Badoo Banson	-	0357251445
David Boateng	-	0367445789

Question 9

Mr. Brown, an MIS Engineer at Vodafone was asked to produce a report on monthly on net sms voice report. Mr. James already has a daily unique subscriber's sms report.

- 1) Assuming you are Mr. Brown, write a code that creates a view to import James view into your user accounts. James view is called: v_onnetvoice_daily
- 2) Write the code James can use to send his view to Brown account as a table?

Question 10

Explain briefly the following and illustrate with codes

- 1) Primary Key
- 2) Foreign key
- 3) Unique index
- 4) Not Null
- 5) DDL
- 6) DML
- 7) DCL
- 8) Sub query
- 9) Union Query
- 10) Join Query

Question 11

As an Airtel MIS Engineer, explain briefly the following terms and illustrate with SQL codes using Voice_cdr table

- 1) On net calls
- 2) Off net calls
- 3) International calls
- 4) Peak calls
- 5) Off Peak Calls
- 6) Late night Calls
- 7) Tele service code
- 8) Dedicated Account used
- 9) ANO
- 10) BNO