1. What are orphaned users? (2 marks)
2. What is the relationship between a User and a Login wrt SQL Server (2 marks)
3. What is the difference between snapshot isolation level and read committed snapshot isolation level (3 marks)
4. What is an intent lock (2 marks)
5. What will be the output for the following query snippet? (3 marks)

Create table table1 (c1 int)

Insert into table1 values(1)

Insert into table1 values(2)

Rollback()

1. What is the difference between truncate and delete? (4 marks)
2. What is a Linked Server? (2 marks)
3. How to return a range of names using LIKE operator, such a FIRSTNAME between ranges A to M? (2 marks)
4. *WHERE FirstName LIKE ‘A-M%’*
5. *WHERE FirstName LIKE ‘A’ to ‘M’%*
6. *WHERE FirstName LIKE ‘[A-M]%’*
7. *WHERE FirstName LIKE (‘A’ - ‘M’)%*
8. If you want to read dirty data, you can use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ table hint in the query. (2 marks)
9. *READDIRTYPAGE*
10. *READUNCOMMITTED*
11. *UNCOMMITTEDPAGE*
12. *READUNCOMMITTEDPAGE*
13. What is the difference between update lock and exclusive lock (4 marks)
14. How do we find out which queries are currently running against a particular SQL Server? (4 marks)
15. Using the tables below, write a query to display the childname (firstname column), along with its father name and mother name (using prs\_father\_id and prs\_mother\_id columns) (5 marks)

CREATE TABLE addresses (

adr\_id INTEGER NOT NULL PRIMARY KEY,

adr\_city VARCHAR(15),

adr\_country VARCHAR(15) NOT NULL);

CREATE TABLE persons (

prs\_id INTEGER NOT NULL PRIMARY KEY,

prs\_father\_id INTEGER,

prs\_mother\_id INTEGER,

prs\_adr\_id INTEGER,

prs\_first\_name VARCHAR(15),

prs\_surname VARCHAR(15),

CONSTRAINT prs\_prs\_father\_fk FOREIGN KEY (prs\_father\_id)

REFERENCES persons(prs\_id),

CONSTRAINT prs\_prs\_mother\_fk FOREIGN KEY (prs\_mother\_id)

REFERENCES persons(prs\_id),

CONSTRAINT prs\_adr\_fk FOREIGN KEY (prs\_adr\_id)

REFERENCES addresses(adr\_id));

INSERT INTO addresses VALUES (1,'RIGA','LATVIA');

INSERT INTO addresses VALUES (2,'BERLIN','GERMANY');

INSERT INTO addresses VALUES (3,'NEW YORK','USA');

INSERT INTO persons VALUES (1,NULL,NULL,NULL,'JANIS','BERZINS');

INSERT INTO persons VALUES (2,1,NULL,2,'PETER','BERZINS');

INSERT INTO persons VALUES (3,NULL,NULL,2,'ANN','SMYTH');

INSERT INTO persons VALUES (4,2,3,2,'CHARLES','BERZINS');

Sample output

Father Name Mother Name Child Name

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PETER ANN CHARLES

1. Using if else statement, check if a particular database has a particular table, return ‘table exists’ or ‘table does not exist’ messages based on the result. (3 marks)
2. Which are the ways used to remove the plan cache of a stored procedure? (2 marks)
3. Drop the SP and recreate it.
4. Call Sp\_recompile stored proc.
5. DBCC FREEPROCCACHE
6. All the above.
7. How is deadlock situation different from blocking? (2 marks)
8. The following queries create a product table and insert values in it.

-- Creating Product Table

CREATE TABLE Product (Cust VARCHAR (25), Product VARCHAR (20), QTY INT)

GO

-- Inserting Data into Table

INSERT INTO Product (Cust, Product, QTY)

VALUES ('KATE','VEG', 2)

INSERT INTO Product (Cust, Product, QTY)

VALUES ('KATE','SODA', 6)

INSERT INTO Product (Cust, Product, QTY)

VALUES ('KATE','MILK', 1)

INSERT INTO Product (Cust, Product, QTY)

VALUES ('KATE','BEER', 12)

INSERT INTO Product (Cust, Product, QTY)

VALUES ('FRED','MILK', 3)

INSERT INTO Product (Cust, Product, QTY)

VALUES ('FRED','BEER', 24)

INSERT INTO Product (Cust, Product, QTY)

VALUES ('KATE','VEG', 3)

GO

-- Selecting and checking entires in table

SELECT \*

FROM Product

GO

1. Pivot table ordered by PRODUCT (4 marks)

PRODUCT FRED KATE

--------------------------------------------

BEER 24 12

MILK 3 1

SODA NULL 6

VEG NULL 5

1. Pivot table ordered by cust (4 marks)

CUST VEG SODA MILK BEER CHIPS

----------------------------------------------------------------

FRED NULL NULL 3 24 NULL

KATE 5 6 1 12 NULL

1. Unpivot table ordered by cust (4 marks)

CUST PRODUCT QTY

-----------------------------------------

FRED MILK 3

FRED BEER 24

KATE VEG 5

KATE SODA 6

KATE MILK 1

KATE BEER 12

1. When do we do index defrag and index rebuild? Why fragmentation (3 marks)
2. How can you find tables without indexes? (3 marks)
3. Explain the performance variation between cursors and loop structures (3 marks)
4. “If you use a SET to set a cursor variable, you must use a DEALLOCATE” – Explain why the cursor variable should be DEALLOCATED? (3 marks)
5. Write a program that prints the numbers from 1 to 100. But for multiples of three print “Fizz” instead of the number and for the multiples of five print “Buzz”. For numbers which are multiples of both three and five print “FizzBuzz”. (6 marks)
6. What is the output when the below SP is executed? (5 marks)

Create Proc usp\_A

As

Begin

Begin Tran

Insert into table A

--insert a record

Begin Tran

Insert into table A

--insert a record

Commit Tran

Rollback Tran

End

1. How to verify whether rows inserted in Partitions or not (2 marks)
2. sys.partitions b) sys.columns c) syspartitions d) sys.functions
3. I am trying to fix queries that perform poorly. I am trying to understand how we look for Dead locks & Table locks caused by a query. What command can be used to achieve the same? (3 marks)
4. What does the ON UPDATE NO ACTION do? (2 marks)
5. A partition column cannot be (2 marks)

a)computed b)identity c)timestamp d)all of the above

1. Consider that there are two tables. Employee and Manager. The Employee table contains the columns EmpId and Name. The Manager table has columns EmpId and ManagerId. Write a stored procedure to return all rows from the Employee table that does not have a Manager. Make sure to use only a sargable query (7 marks)
2. Consider a table with the following data (6 marks)

**Fname lname dob date**

vijay kumar 05/06/1985 01/01/2008

bhanu bali 07/08/1975 02/02/2008

vijay kumar 05/06/1985 03/01/2008

vijay kumar 05/06/1985 04/05/2008

vipul shah 02/08/1956 02/08/2009

samir khan 02/02/1956 02/02/2009

vijay kumar 05/06/1985 02/05/2009

vijay kumar 05/06/1985 05/06/2009

bhanu bali 07/08/1975 08/10/2009

bhanu bali 07/08/1975 12/12/2009

Provide distinct count based on fname,lname,dob for 2008 and 2009

That is, the output should be as follows,

t1(2008) t2(2009) bothyear

2 4 2

1. Consider the following source data (8 marks)

RootNode ParentNode Node Name Number Valid Value

-------------------------------------------------------------------------------------------

Reference Basic Book Book1 1 true AH.KL.LO

Reference App A App1 1 true AIK.LPO

Reference App A App2 2 true JUI.MKJ

Write a FOR XML query to generate the below XML code

<Reference>

<Basic>

<Book Name="Book1" number="1" Valid="true">AH.KL.LO</Book>

</Basic>

<App>

<A Name="App1" number="1" Valid="true">AIK.LPO</A>

<A Name="App2" number="2" Valid="true">JUI.MKJ</A>

</App>

</Reference>

1. Consider the following tables, (7 marks)

CREATE TABLE dbo.TempTable

(

NameNVarchar NVARCHAR(64),

NameVarchar VARCHAR(64),

NameChar CHAR(64)

)

INSERT INTO dbo.TempTable VALUES

('Lincoln Burrows', 'Lincoln Burrows', 'Lincoln Burrows')

INSERT INTO dbo.TempTable VALUES

('Michael Scofield', 'Michael Scofield', 'Michael Scofield')

How to find the length and storage size of the different data types.