1). Which normal form is considered adequate for relational database design?

a. 2NF b. 3NF c. 4NF d. BCNF **ANSWER:: B**

2). Consider a relational table with a single record for each registered student with the following attributes:

1. Registration_Num: Unique registration number of each registered student

2. UID: Unique identity number, unique at the national level for each citizen

3. BankAccount_Num: Unique account number at the bank. Astudent can have multiple accounts or joint accounts. This attributes store the primary account number.

4. Name: Name of the student

5. Hostel_Room: Room number of the hostel

Which of the following options is INCORRECT? **ANSWER: a, b, c**

a). BankAccount_NUM is a candidate key b). Registration_Num can be a primary key

c). UID is a candidate key if all students are from the same country

d). If S is a super key such that S $\cap$ UID is NULL then S $\cup$ UID is also a super key.$\subset\supset$

3). A functional dependency of the form X $\rightarrow$ Y is trivial if

a). Y $\subseteq$ X b). Y $\subset$ X c). X$\subseteq$ Y d). X $\subset$ Y and Y $\subset$ X **ANSWER: A**

4). If every non-key attribute is functionally dependent on the primary key, then the relation will be in **ANSWER: C**

a). first normal form b). Second normal form c). third normal form d). Fourth normal form

5). The column of a table is referred to as the

a). Tuple b). Attribute c). Entity d). Degree **ANSWER: B**

6). Given the functional dependencies X$\rightarrow$W; X $\rightarrow$ Y; Y$\rightarrow$ Z and Z$\rightarrow$ PQ

Which of the following does not hold good?

a). X $\rightarrow$ Z b). W$\rightarrow$ Z c). X$\rightarrow$WY d). None of the above **ANSWER: B**

7). Which of the following is TRUE?

a). Every relation in 3NF is also in BCNF.

b). A relation R is in 3NF if every non-prime attribute of R is fully functionally dependent on every key of R.

c). Every relation in BCNF in also in 3NF.

d). No relation can be in both BCNF and 3NF. **ANSWER:** C

8). The data flow model of an application mainly shows

a). The underlaying data and the relationships among them.

b). Processing requirements and the flow of data

c).Decision and control information d). Communication network information **ANSWER:** B

9). Consider the set of relations given below and the SQL query that follows:

Students : (Roll_number, Name, Date_of_birth)

Courses : (Course_number, Course_name, Instructor)

Grades : (Roll_number, Course_number, Grade)

SELECT DISTINCT Name

FROM Students, Courses, Grades

WHERE Students. Roll_number = Grades. Roll_number

ANDCourses.Instructor = Korth

And Courses.Course_number = Grades. Course_number

AND Grades.Grade = A

Which of the following sets is computed by the above query?

a). Names of students who have got an A grade in all courses taught by Korth

b). Names of students who have got an A grade in all courses

c). Names of students who have got an A grade in at least one of the courses taught by Korth

d). None of the above **ANSWER:**C

10). Given the basic ER and relational models, which of the following is INCORRECT?

a). An attribute of an entity can have more than one value.

b). An attribute of an entity can be composite

c). In a row of a relational table, an attribute can have more than one value **ANSWER:** C

d). In a row of a relational table, an attribute can have exactly one value or a NULL value.

11). For a database relation R(a,b,c,d) where the domains of a,b,c, and d include only atomic values, only the following functional dependencies and those that can be inferred from them hold.

a → c

b → d

The relation is in

a). First normal form but not in second normal form

b). Second normal form but not in third normal form

c). Third normal form d). None of the above **ANSWER:** A

12). An index is clustered, if

a). It is on a set of fields that form a candidate key

b). It is on a set of fields that include the primary key

c). The data records of the file are organized in the same order as the data entries of the index.

d). The data records of the file are organized not in the same order as the data entries of the index. **ANSWER:** C

13). Consider the following relational schema.

Students(rollno:integer, sname: string)

Courses(courseno: integer,cname:string)

Registration(rollno: integer, courseno:integer,percent:real)

Which of the following queries are equivalent to this query in English?

"Find the distinct names of all students who score more than 90% in the course numbered 107"

I) SELECT DISTINCT S. sname
FROM Students as S, Registration as R
WHERE R.rollno = S.rollno AND R. courseno=107 And R.percent>90

II). $\Pi_{sname}(\sigma_{courseno}$= 107 percent > 90 (Registration Students)

III). { T | ∃S € Students, ∃ R € Registration (S. rollno = R. rollno ^R.course = 107 ^ R. percent > 90 ^T. sname = S.sname

IV). {<S_N> | ∃S_R∃ R_P (< S_R, S_N>€ Students ^< S_R, 107, R_P> € Registration ^ R_P>90) }

a). I ,II, III and IV b). I,II,III only c). I,II,IV only d). II, III and IV only. **Answer: A**

14). A datamodel is a collection of conceptual tools for describing

a). Data and data relationships b). Data semantics and consistency constraints . **Answer: C**

c). data,data relationship, data semantics and consistency constraints d). none of the above **Answer: C**

15). The employee information in a company is stored in the relation

Employee : (name, sex, salary, deptName)

Assume name id the primary key. Consider the SQL query

SELECT deptName

FROM Employee

WHERE sex= M

GROUP BY = deptName

HAVING avg(salary) > (SELECT avg (salary) from Employee)

It returns the names of the departments in which the average salary

a). IS more than the average salary in the company

b). of the male employee is more than the average salary of all the male employees in the company.

c). of the male employee is more than the average salary of the employee in the same department.

d). of the male employee is more than the average salary in the company. **Answer: D**

16). Choose the incorrect statements.

a). In Network model, data is represented by a collection of records, and relationship among data are represented by links.

b). In hierarchical model, data and relationships among data are represented by records and links respectively.

c). In hierarchical model, the records are organized as a collection of arbitrary graphs.

d). In network model, the records are organized as a collection of trees. **Answer: C,D**

17). Student and courses enrolled, is an example of

A). One – to one relationship b). One – to – many relationship

c). Many – to – one relationship d). Many – to-many relationship **Answer: D**

18). Choose the correct statement

a). An alternate key is a candidate key that is not a primary key

b). An alternate key is a primary key that is not a candidate key

c). An alternate key is a candidate key that is also a primary key

d). None of the above **Answer: A**

19). E-R modeling technique is a

a). Top-down approach b). Bottom-up approach

c).Left – right approach d). None of the above

Answer: a

20). Third normal form is inadequate in situations where the relation

a) . has multiple candidate keys b). Has candidate keys that are composite

c). Has overlapped candidate keys d). None of the above **Answer: A,B,C**

21). Redundancy is dangerous as it is a potential threat to data

a). Integrity b). consistency c). Sufficiency d). None of the above **Answer:A, B**

22). Let R be a relation. which of the following comments about the relation R are correct?
a). R will necessarily have a composite key if R is in BCNF but not in 4NF
b). If R is in 3NF and if every key of R is simple, then R is in BCNF
c). If R is in BCNF and if R has at least one simple key, then R is in 4NF
d). If R is in 3NF and if its every key is simple, then R is in 5NF **Answer: A,B,C,D**
23). An attribute of one table matching the primary key of another table, is called as
(a) foreign key (b) secondary key (c) candidate key (d) composite key **Answer: A**
24. A primary key if combined with a foreign key creates
(a) parent child relationship between the tables that connect them
b). many-to-many relationship between the tables that connect them
c). network model between the tables that connect them d). none of the above **Answer :A**
25. Choose the correct statement.
(a) Network models are complicated by physical keys, but the relational model is faster because it uses logical keys.
(b) Network models are complicated by logical keys, but the relational model is faster because it uses physical keys.
c). Network models are complicated by logical keys, but the relational model is slower because it uses physical keys.

d). Network models are complicated by physical keys but the relational model is slower because it uses logical keys. **Answer: A**

26).The employee salary should not be greater than Rs. 2000. This is **Answer: A**
a. integrity constraint b. referential constraint c).over-defined constraint d) feasible constraint
27). Manager's salary details are hidden from the employee. This is
a.conceptual level data hiding b. physical level data hiding c). external level data hiding
d). none of the above
Answer: C
28). The SQL expression
select distinct T . branch name from branch T, branch S where T.assets> S . assets and S. branch city= "PONDICHERRY" finds the names of
a). all branches that have greater assets than any branch located in PONDICHERRY
b). all branches that have greater assets than all branches located in PONDICHERRY

c). the branch that has the greatest asset in PONDICHERRY
d) any branch that has greater asset than any branch located in PONDICHERRY **Answer: A**

29). A trigger is
a). a statement that enables to start any DBMS
b). a statement that is executed by the user when debugging an application program

c) a condition the system tests for the validity of the database user
d) a statement that is executed automatically by the system as a side effect of a modification to the database **Answer: A**

The next two questions are based on the following information.
Entity TRANSACTION has the attributes transaction number, date, amount.
Entity ACCOUNT has the attributes account number, customer name, balance.
30). Which is the discriminator of the weak entity?
a). Account number (b) Transaction number (c) {Account number, date} (d) date **Answer: B**
31). Which is the primary key of the weak entity?
a). Account number (b) {Accotmt number, tansaction number}
(c) {Account number, date} (d) {Transaction number, date} **Answer: B**
32). Consider the relation
EMPLOYEE (Emp—no, Emp—name, salary, project--no, due—date)
(Assuming an 1-1 relationship between project and employees)
Project—no is functionally dependent on
a). Emp-name (b) Emp-no (c) due-date (d) none of the above **Answer: B**
33). In the previous question, which of the following is/are functionally dependent onEmp_name?(Assume no two persons have the same name.) **Answer: a,b,c,d**
(a) Emp-no b)Project-no, salary c) Salary,due-date d) Emp-no,salary, project-no, due-date
34). Let R(a,b,c) and S(d,e,f) be two relations in which d is the foreign key of S that refers to the primary key of R. Consider the following four operations.
(a) Insert into R b) Insert into S c) Delete from R (d) Delete from S
Which of the following is true about the referential integrity constraint above?
(a) None of them can cause any violation (b) All of them can cause violation **Answer: D**
c) Operations a) and d) can cause violation (d) Operations b) and c) can cause violation
35). Which one of the following statements is FALSE?(GATE 2007)

a) Any relation with two attributes is in BCNF.
b) A relation in which every key has only one attribute is in 2NF.
c) A prime attribute can be transitively dependent on a key in a 3NF relation.
d) A prime attribute can be transitively dependent on a key in a BCNF relation. **Answer: D**

36). Generally speaking, for a weak entity set to be meaningful it must be part of a
(a) one-to-one relationship b). one – to – many relationship
(c) many-to-many relationship d) none of the above **Answer: B**
37). If a relation scheme is in BCNF, then it is also in **Answer:** C
(a) first normal form (b) second normal form (c) third normal form (d) none of the above
38). Consider the following set of functional dependencies on the scheme (A, B, C).
A →BC
B → C
A → B
AB → C
The canonical cover for this set is
(a) A →BC and B →C (b) A→ BC and AB→ C (c) A →BC and A →B (d) A →B and B→C
39). Assume transaction A holds a shared lock R. If transaction B also requests for a shared lock on R, it will
a). result in a deadlock situation b). immediately be granted
c). immediately be rejected d). be granted as soon as it is related by 4.
40). Consider the relation employee (name sex, supervisorName) with name as the key SUPervisorName gives the name of the supervisor of the employee under consideratiom (GATE 2007)
{e . name |employee (e) ^
(∀ x) [¬ employee (x) v x. supervisorName ≠ e. name v
x . sex = "male"] }
a). Names of employees with a male supervisor.
b). Names of employees with no immediate male subordinates.
c). Names of employees with no immediate female subordinates.
d). Names of employees with a female supervisor. **Answer: B**
41). The following functional dependencies hold for relations R(A, B, C) and S(B, D, E):
B → A
A → C
The relation R contains 200 tuples and the relation S contains 100 tuples. What is the maximum number of tuples possible in the natural join R S? (GATE 2010)\
(a) 100 (b) 200 (c) 300 (d) 2000 **Answer: A**

42. NOT BETWEEN 10 AND 20
(a) displays NULL values b) does not display NULL values
(c) may display NULL values d) none of these **ANSWER :** B
* 43. The SQL statement
SELECT SUBSTR('123456789', INSTR('abcabcabc 'b'), 4) FROM
DUAL;
prints
(a) 6789 (b) 2345 (c) 1234 (d) 456789 **ANSWER : B**
*44. The SELECT statement
SELECT ' Hi ' FROM DUAL WHERE 1 = NULL; outputs
a) Hi b) FALSE c) TRUE d) nothing **ANSWER : D**
45. Which of the following group functions ignore NULL values?
(a) MAX (b) COUNT (c) SUM d). COUNT (*) **ANSWER : A, B, C**
*46 Table Employee has 10 records. It has a non-NULL SALARY column which is alsoUNIQUE. The SQL statement
SELECT COUNT (*)
FROM EMPLOYEE
WHERE SALARY > ANY (SELECT SALARY FROM EMPLOYEE) ;

prints
(a) 10 b). 9 c). 5 d). 0 **ANSWER : B**
*47. The SQL statement
SELECT SUBSTR('abcdefghij', INSTR ('123321234', '2', 3, 2), 2) FROM DUAL;
Prints
(a) gh b) 23 c) bc d) ab **ANSWER : A**
*48. From the following combinations of wildcard characters, choose those that are equivalent
a). % b). _% c). %_ d). _ _ **ANSWER : B, C**
*8. The SQL statement
SELECT ROUND (45 . 926, -1) FROM DUAL:

a) is illegal b) prints garbage c) prints 045.926 d) prints 50 **ANSWER : D**
49. Which of the following must be enclosed in double quotes?
(a) Dates b) Column Alias c) Strings d) All of these **ANSWER : B**
*50. If the SQL statement
SELECT NEXT_DAY (' 01-SEP-95 ', 'FRIDAY') FROM DUAL; prints
08-SEP-9 what will the SQL statement
SELECT NEXT_DAY (' 01-SEP-95', 'SATURDAY') FROM DUAL; print
(a) 09-SEP-95 b) 02-SEP-95 c) 05-SEP-95 d) 06-SEP-95 **ANSWER : B**
*51. The SELECT statement
SELECT 'Hi ' FROM DUAL WHERE 1 ! = NULL; outputs
(a) TRUE b) Hi c) FALSE d) nothing **ANSWER : D**
*52. In SQL, 10/NULL will evaluate to
(a) FALSE b). – 1 c) NULL d) 10 **ANSWER : C**
53. Almost all the DATE functions return a value of data type DATE, except
(a) MONTHS_ BETWEEN b) ROUND (c) NEXT_DAY (d) TRUNC **ANSWER : A**
54. The SELECT statement
SELECT LOWER('AbCd') , UPPER('AbCd') , INITCAP ('AbCdeFgh') FROM DUAL;

will print

(a) abcd ABCD AbcdEfgh (b) abcd ABCD ABCD EFGH
(c) abcd ABCD abcdefgh (d) abcd ABCDaBCDeFGH **ANSWER : A**
*55. The SQL statement

SELECT TRUNC (45. 926, -1) FROM DUAL;
(a) is illegal B). 5 c) prints 45.9 d) prints 40 **ANSWER : D**
56). The SQL statement
SELECT SUBSTR('123456789' , INSTR ('abcabcabc' ,4)) FROM DUAL; prints
a) 2345 b) 6789 c) 56789 d) 89 **ANSWER : C**
57). The SQL statement
SELECT SYSDATE FROM DUAL;
prints
06-FEB-05
Consider the three SQL statements
SELECT To_DATE((LTRIM (RTRIM ('Nov 23, 2005')) , ' Mon DD YY') FROM DUAL; …… Statement I
SELECT TO_DATE((RTRIM (LTRIM(' Nov 23, 2005 '))), 'Mon DD YY') FROM DUAL; - Statement 2
SELECT TO_DATE('Nov 23, 2005', 'Mon DD YY') FROM DUAL; …..Statement 3 ,
Which of these statements gives the same output? **ANSWER :D**
A). Only Statement 1 and Statement 2 B). Only Statement 1 and Statement 3
C). Only Statement 2 and Statement 3 D). All the three statements give the same output

Table name:::CustInfo

CUSTNUM	CITY	ORDERNUM
1001	Kanpur	2001
1002	Vizag	2002
1003	Guntur	2003
1004	Agra	2004
1005	Guntur	2005
1006	Pune	2006
1007	Guntur	2007
1008	Pune	2008
1009	Delhi	2009
1010	Imphal	2010

Table name::OrderInfo

ORDERNUM	ORDERDATE	ORDEREDITEM	QUANTITY
2001	02-FEB-05	Pen	5
2001	02-FEB-05	Pencil	3
2002	13-JAN-05	Pen	3
2002	13-JAN-05	Pencil	8
2003	11-JAN-05	Table	1
2004	11-JUN-04	Chair	4
2005	11-JAN-04	Table	1
2006	17-APR-01	Pen	10
2007	21-JUL-04	Pencil	20
2008	15-JAN-05	Table	2
2009	10-OCT-02	Table	1
2009	10-OCT-02	Pen	1
2009	10-OCT-02	Pencil	1
2010	18-OCT-03	Table	1

Table Name: ItemInfo

ITEMNAME	UNITPRICE(in Rs.)
Pen	10
Pencil	2
Table	101
Chair	26

58. Which of the following could be the primary key of the Orderlnfo table?
a) OrderNum b) OrderDate c) Orderedltem d) None of these **ANSWER :D**
*59. Which of the following could be the secondary key of the Orderlnfo table?
a) OrderNum b) OrderDate c) Orderedltem d) None of these **ANSWER : A**
*60. If someone talks of order header information, probably he/she is referring to the table
(a) Custlnfo (b) Orderlnfo (c) Itemlnfo (d) none of these **ANSWER : A**
*61. The SQL statement
SELECT SUM (B. Quantity * C. UnitPrice)
FROM CustlnfoA, OrderInfo B, ItemInfo C

WHERE A .custNum =1009
AND A. OrderNum= B . OrderNum
AND B .OrderedItem =C. ItemName ;
prints,
(a) 101 (b) an unpredictable value (c) 1139 (d) none of these **ANSWER : D**

*62. To answer the question 'Whose bill is the highest' we need to write a SQL query that joins the tables
a) Custlnfo, Orderlnfo, and Itemlnfo b) Orderlnfo and Itemlnfo
c). Custlnfo and Itemlnfo d) none of these **ANSWER : A**

*63. How many rows does the following SQL query print?
SELECT DISTINCT A .OrderNum, B.OrderNum
FROM CustInfo A, OrderInfo B
Group By (A.OrderNum, B.OrderNum);
a). 10 b). 24 c). 100 d). 240 **ANSWER :C**

64. Fill the blanks in the following query that finds the number of orders that ordered for either pen or pencil.
SELPCT …….. (DISTINCT ……..)
FROM Orderlnfo B
WHERE B. Ordered Item = ‘ Pen’ ……. B. OrderedItem = ……;
a). COUNT, OrderNum, OR, 'Pencil' b). COUNT, OrderNum, 'OR' Pencil'
c) UNIQUE, OrderNum, OR, 'Pencil' d) None of these **ANSWER : A**

65. Fill the blanks in the following query that finds the number of customers who ordered for either pen or pencil.
SELECT COUNT (……. A. CustNum)
FROMCustlnfo A, Orderlnfo B
WHEREA . OrderNum= B . OrderNum
……..B . Ordered Item …….. ('Pen’, 'Pencil') ; **ANSWER :C**
a) ALL, AND, NOT IN b) ALL, OR, IN c) DISTINCT, AND, IN d) DISTINCT, OR, IN

*66. Which of the following CustNum will not be displayed by the following SQL query?
SELECTA .CustNum
FROMCustlnfo A, Order Info B
WHEREA. OrderNum = B. OrderNum
ANDB . OrderedItem ='Pen’
UNIONSELECTA. CustNum
FROMCustlnfo A, OrderInfo B
WHEREA. OrderNum = B .OrderNum
ANDB . OrderedItem ='Pencil' ;
(a) 1006 b) 1007 c) 1008 d) 1009 **ANSWER : C**

*67. How many rows will be displayed by the following SQL query?
SELECT A. CustNum
FROM Custlnfo A, Order Info B
WHERE A .OrderNum= B . OrderNum
AND B .OrderedItem = 'Pen'
UNION ALL
SELECT A. CustNum

FROM Custlnfo A, Order Info B
WHERE A .OrderNum = B .OrderNum
AND B.OrdererdItem = ‘Pencil’
A). 7 B). 8 C). 9 d) 10 **ANSWER : B**

*68. Which CustNum will not be displayed by the following SQL query?

SELECT A. CustNum
FROMCustlnfoA,OrderInfo B
WHEREA. OrderNum = B . OrderNum
AND B . Ordered Item = ‘Pen’

INTERSECT
SELECT A. CustNum FROM Custlnfo A, Order Info B
WHERE A .OrderNum = B . OrderNum
ANDB. Ordered Item ='Pencil' ;
(a) 1001 b) 1002 c) 1006 d) 1009 **ANSWER : C**

*69. How many CustNum will be displayed by the following SQL query?
SELECT DISTINCT A. CustNum
FROM Custlnfo A, OrderInfo B
WHERE A. OrderNum = B. OrderNum
AND B. Orderedltem NOT IN (SELECT A. Ordered Item
FROM Order Info A
WHERE A. OrderNum IN (2001, 2002));

a). 4 b). 5 c). 6 d). 7 **ANSWER : C**

*70. How many CustNum will be displayed by the following SQL query?
SELECT DISTINCT A. CustNum
FROMCustlnfo A, Order Info B
WHERE A. OrderNum= B . OrderNum
AND B. Ordered Item IN ('Pen' , 'Pencil')
INTERSECT
SELECT A. CustNum
FROMCustlnfo A, Order Info B
WHERE A. OrderNum = B .OrderNum
AND B . Ordered Item NOT IN ('Pen' , 'Pencil') ;

a). 0 b). 1 c). 4 d). 5 **ANSWER : B**

*71. How many CustNum will be displayed by the following SQL query?
SELECT DISTINCT A. CustNum
FROMCustlnfo A, Order Info B
WHERE A. OrderNum =B .OrderNum
AND A. City IN ('Kanpur' , 'Guntur’)
AND B . Ordered Item IN ('Table' , 'Chair') ;
a). 0 b). 1 c). 2 d). 3 **ANSWER : C**

*72. How many CustNum will be displayed by the following SQL query?
SELECT DISTINCT (A. CustNum)
FROMCustlnfo A, OrderInfo B
WHEREA. OrderNum = B. OrderNum
AND B . Ordered Item IN ('Table' 'Chair' , ‘Pen’, 'Pencil')
MINUS
SELECT DISTINCT (A. CustNum)
FROM Custlnfo A, OrderInfo B
WHERE A. OrderNum = B. OrderNum
AND A. City IN ('Kanpur' ,’Vizag' , ‘Guntur' , 'Agra' , 'Pune' , 'Delhi' , 'Imphal') ;
A). 0 B). 1 C). 2 D). 3 **ANSWER : A**

73. Which of the following remarks about the following query are true?
SELECT DISTINCT (A.CusNum)
FROM Custlnfo A, OrderInfo B

WHERE A. OrderNum = B OrderNum
AND B.OrderedItem = (SELECT C . ItemName
FROM ItemInfo C
WHERE C.UnitPrice = (Select Max (C. UnitPrice)
FROM ItemInfo C));
a) This query is syntactically wrong b) It returns 5 rows **ANSWER : B, C, D**
c). One of the CustNum returned is 1008 d). It returns all CusNum that ordered a table
74. Which Of the listed options can fill the blank if the following query displayed exactly 6 rows?
SELECT DISTINCT (A. CustNum)
FROMCustInfoA, OrderInfo B
WHERE A. OrderNum = B. OrderNum
AND B. OrderedItemIN (SELECT C . ItemName)
FROM ItemInfo C
WHERE C.UnitPrice>_____);
a). 2 b). 8 c) 20 d) 30 **ANSWER : C**
*75. What is the CustNum that will be displayed by the following query?
SELECT DISTINCT (A. CustNum)
FROM Custlnfo A, Order Info B
WHERE A. OrderNum= B . OrderNum
ANDB. Order Date = (SELECT MAX (C. OrderDate)
FROM Orderlnfo C) ;
a) 1001 b) 1002 c) 1003 d) 1004 **ANSWER : A**

*76. How many rows are returned by the following query?
SELECT DISTINCT (A. CustNum)
FROMCustlnfo A, Order Info B
WHERE A .OrderNum = B .OrderNum
AND B. OrderDate BETWEEN '11-JUN-04' AND '02-FEB-05';
a). 4 b). 5 c). 6 d). 7 **ANSWER : C**
*77. The query
SELECT SYSDATE FROM DUAL; displays
02-FEB-05
How many rows will be displayed by the following query?
SELECT DISTINCT (A. CustNum)
FROMCustlnfo A, Order Info B
WHERE A. OrderNum = B . Order Num
AND SUBSTR (TO CHAR (B. OrderDate) , 8) =
(SELECT SUBSTR (TO_CHAR (SYSDATE) , 8)
FROM DUAL) ;
a). 1 b). 2 c). 3 d). 4 **ANSWER : D**
78. Which of the following combinations of wildcard characters has the same meaning as the wildcard character %?
a). %% b). _% c). %_ d). _ _ **ANSWER :A**
*79. The statement
SELECT 'Hi' FROM DUAL WHERE NULL = NULL; outputs
(a) Hi b).FALSE c). TRUE d). nothing **ANSWER :D**

80). Which of the following illegal?
a).SELECT SYSDATE - SYSDATE FROM DUAL;
b). SELECT SYSDATE - (SYSDATE - 2) FROM DUAL;
c). SELECT SYSDATE - (SYSDATE + 2) FROM DUAL; d).None of these. **ANSWER :D**

81). When a SELECT statement displays data
a).dates and strings will be justified to the left by default
b).numbers will be justified to the right by default
c). dates and strings will be justified to the right by default
d). numbers will be justified to the left by default **ANSWER : A, B**
82). If a query involves NOT, AND, OR with no parenthesis
a). NOT will be evaluated first; AND will be evaluated second; OR will be evaluated last.
b). NOT will be evaluated first; OR will be evaluated second; AND will be last.
c). AND will be evaluated first; OR will be evaluated second; NOT will be evaluated last.
d). the order of occurrence determines the order of evaluation. **ANSWER :A**
83). Choose the correct statements.
a). ORDER BY NAME ASC, displays NULLs last
b). ORDER BY NAME DESC, displays NULLs first
c). ORDER BY NAME ASC, displays NULLs first
d). ORDER BY NAME DESC, displays NULLs last **ANSWER :A, B**
*84. The SQL statement
SELECT LENGTH (‘ ') FROM DUAL; - - ' ' is two single quotes prints,
a).0 (b) a garbage value (c) NULL d). 1 **ANSWER :C**
85). The SQL statement
SELECT INSTR ('abcdecfg' , ' c') FROM DUAL ;
prints,
a). 2 b). 3 c). 5 d). 6 **ANSWER : B**
86). The SQL statement
SELECT LPAD('abcd' , 10, ‘*’) FROM DUAL; prints,
a). abcd****** (b)******abcd (c) ***abcd*** d). ********** **ANSWER : B**
87).Table EMPLOYEE has 5 rows. Consider the following sequence of SQL statements.
SQL> CREATE TABLE myTab1e AS (SELECT * FROM EMPLOYEE);
SQL> INSERT INTO myTableSELECT * FROM myTable;
SQL> INSERT INTO myTableSELECT * FROM myTable;
SQL> INSERT INTO myTableSELECT * FROM myTable;
SQL> INSERT INTO myTableSELECT * FROM myTable;
If the SQL statement
Select count(*) from myTable;
Is executed after executing all the statements listed above, what will be printed is
a). 80 b). 25 c). 20 d). 5 **ANSWER :A**
*88. Let the statement
SELECT column1 FROM myTable;
return 10 rows. The statement
SELECT ALL column1 FROM myTable;
will return
(a) less than 10 rows b).more than 10 rows c) exactly 10 rows d). None of these.**ANSWER : C**
89. The SQL statement
SELECT (NVL (NVL (NULL, 3), 4)) from dual;
a) prints 3 b) prints 4 c) prints NULL d) none of these **ANSWER :A**
*90. Table Employee has 10 records. It has a non-NULL SALARY column which is
alsoUNIQUE. The SQL statement

SELECT COUNT (*)
FROM EMPLOYEE
WHERE SALARY> ALL (SELECT SALARY FROM EMPLOYEE) ; prints
(a) 10 b). 9 c). 5 d). 0 **ANSWER :D**

*91. The SELECT statement
SELECT 'Hi' FROM DUAL WHERE 1 ! = NULL; outputs
a) Hi b) FALSE (c) TRUE (d) nothing **ANSWER :D**
92. Which of the following SQL commands can be used to add data to a database table?
a). ADD b) UPDATE c) APPEND d) INSERT **ANSWER :D**
93. The SQL statement
SELECT DECODE (2, 2, DECODE (3 , 3, 2)) FROM DUAL;

a) is illegal b) prints garbage c). 3 d). 2 **ANSWER :D**
*94. Which of the following joins is also called as an 'inner join'?
(a) Non-Equijoin b) Self-Join c) Equijoin d) None of these **ANSWER : C**

(55-67)
Consider the following table. (Table Name :train_info)

TrainNum	from	To	Through1	Through2	Through3
1	Chennai	New Delhi	Vijayawada	Jhansi	Agra
2	Vijayawada	New Delhi	Jhansi	Agra	
3	Hyderabad	Kanpur	Vijayawada	Jhansi	
4	Hyderabad	Kanpur	New Dlehi	Agra	
5	Vijayawada	Agra	Hyderabad	Jhansi	Kanpur
6	Chennai	Vijayawada			

95). The SQL statement
SQL> SELECT COUNT (*) FROM train_info
WHERE Through1 LIKE '%ad%'; will print,
a). 1 b). 2 c). 3 d). 4 **ANSWER :C**
*96. How many record(s) will be printed by the following SQL query?
SQL> SELECT A. From, B. To
FROM train_infoA, train_info B
WHERE A. To = B. From;
a) No record b) 1 record c) 2 records d) None of these **ANSWER : C**
97). The SQL statement
SQL> SELECT COUNT (*)
FROM train_info A, train_info B
WHERE A. From = B. From
AND A. To= B. To
Will print,
a). 6 b). 7 c). 8 d). none of these **ANSWER :C**
98). The SQL statement
SQL> SELECT COUNT (*)
FROM train_info A,train_info B
WHERE A. From = B. From
AND A. To = B. To
AND A.trainNum<> B. trainNum; Will print,
a). 0 b). 1 c). 2 d). none of these **ANSWER : C**
99).The SQL statement

SQL> SELECT COUNT (*) FROM train_info A, train_info B, train info C; will print,

a). 6 (b) 18 (c) 12 (d) 216 **ANSWER : D**

100). The SQL statement

SQL> SELECT * FROM train_info
MINUS
SQL>SELECT * FROM train_infoWHERE MOD(trainNum,2) = 0 ;
WILL PRINT,
a). No records b). 3 records c). 5 records d). 6 records. **ANSWER :B**

101). The SQL statement
SQL>SELECT * FROM train_info A, train_info B
WHERE A.trainNum< 3;
UNION

SQL>SELECT * FROM train_info A, train_info B

WHERE A.trainNum>= 3; will print,
a). no records b). 6 records (c) 12 records (d) 36 records **ANSWER :D**

102. The SQL statement
SQL> SELECT * FROM train_infoA, train_info B
WHERE A. From = 'Chennai' OR B. To = ' New Delhi'; will print

a). 12 records b). 22 records c). 24 records d). none of these **ANSWER :D**

103). The SQL statement
SQL> SELECT * FROM train_infoA, train_info B
WHERE A. From = 'Chennai' ORA.From = 'Hyderabad'

MINUS

SELECT * FROM train_info A, train_info B where B.To = 'kanpur'; will print

a). 12 records b). 16 records c). 18 records d). 24 records. **ANSWER : B**

104). The SQL statement
SQL> SELECT * FROM train_infoA, train_info B
WHERE A. From = 'Chennai' ANDB.From = 'Chennai';

Will print
a). no records b). 4 records c). 6 records d). 12 records. **ANSWER : B**

105. The SQL statement
SQL>SELECT * FROM train_infoWHERE MOD (trainNum, 2) =1;
MINUS
SELECT * FROM train_infoWHERE MOD (trainNum, 3) = 0; will print,

a). no records b). 1 records c). 2 records d). 3 records **ANSWER : C**

106. The SQL statement
SQL>SELECT A. From, B. From
FROMtrain_info A, train_info B
GROUP BY (A. From, B. From) ; will print,
a). 6 records b). 8 records c). 12 records d). none of these **ANSWER :D**

*107. The SQL statement

SQL>SELECT A. From, B. FromFROM train_ info A, train_info B
GROUP BY (A. From, B. From)
HAVING A. From = 'Vijayawada' ; will print,

a) 3 records b) 4 records c) 5 records d) 6 records **ANSWER : A**

108). Choose the correct statements.
a). Column alias cannot be used in the ORDER BY clause
b).Column alias can be used in the ORDER BY clause
c) Column alias can be used in the WHERE clause
d) Column alias cannot be used in the WHERE clause **ANSWER : B, D**
109). The WHERE clause - WHERE city LIKE '%a \ _ %b' cannot display
a) ab b) abb c). a_b d). a_%b **ANSWER :A, B**

*110. Choose the correct statements.
a) FALSE AND NULL evaluates to FALSE b) TRUE AND NULL evaluates to NULL
c). NOT NULL evaluates to NULL d). FALSE OR NULL evaluates to NULL**ANSWER : A, B, C, D**
111. Choose the correct statement that is based on a SQL query that has its ORDER BY clause defined as ORDER BY name, game DESC
a) Vijay, Golf will be listed before Anand, Chess
b). Anand, Chess will be listed before Vijay, Golf
c) Bhupathi, Tennis will be listed before Anand, Chess
d) Bhupathi, Tennis will be listed before Vijay, Golf **ANSWER :D**
112. Which of the following SELECT statements print the string 56?
(a) SELECT SUBSTR('123456' , 5) FROM DUAL;
(b) SELECT SUBSTR('123456' , -2) FROM DUAL;
(c) SELECT SUBSTR('123456' , 5,2) FROM DUAL;
(d) SELECT SUBSTR('123456' , -2, 2) FROM DUAL; **ANSWER : A, B, C, D**
*113. The SQL statement
SELECT LPAD ('abcd' 10, 'wert') FROM DUAL; Prints,
a). wertweabcd b). abcdwertwer c). wertwertab d). Abwertwert **ANSWER : A**
74). The SQL statement
SELECT ROUND (45.926, -2) FROM DUAL;
A). is illegal b).prints garbage c). prints 45.92 d). prints 0 **ANSWER :D**
115).Choose the correct statement
The SQL statement –
SELECT SYSDATE FROM DUAL; Prints,
19- FEB – 05
a). The SQL statement - SELECT ROUND (SYSDATE, 'MONTH') FROM DUAL;
will print 01-MAR – 05
b). The SQL statement - SELECT TRUNC (SYSDATE, 'MONTH') FROM DUAL;
will print 01- FEB – 05
c). The SQL statement - SELECT ROUND (SYSDATE, 'YEAR') FROM DUAL;
will print 01 - JAN – 05
b). The SQL statement - SELECT TRUNC (SYSDATE, 'YEAR') FROM DUAL;
will print 01- JAN – 05 **ANSWER : A, B, C, D**
*116. The SQL statement
SELECT NVL (NVL (NULL, NVL (NULL, 3)) , 4) FROM DUAL;
(a) prints 3 b) prints 4 c) prints NULL d) is illegal **ANSWER : A**
117. The SQL statement

SELECT DECODE (2, 2, DECODE (3 , 7, 2, 4, 5, 6)) FROM DUAL; prints
a). 2 b). 5 c). 6 d). 7 **ANSWER : C**

*118. Let email has the value of an email ID. Fill in the blanks in the following SQL statement that prints the domain name. (The domain name of myname@abcd.com is abcd.com)
SELECT SUBSTR (email, INSTR (email, ……) FROM DUAL;

a). '@', 1) + 1) b). '@', 1)) c). '@', 1) – 1) d) None of these **ANSWER : A**

119). Table Employee has 10 records. It has a non-NULL SALARY column which is also UNIQUE. The SQL statement

SELECT COUNT (SALARY) FROM EMPLOYEE WHERE SALARY NOT IN (NULL) ; prints.

a). 10 b). 9 c). 5 d). 0 **ANSWER : D**

120). The FROM clause –EMPLOYEE LEFTOUTER JOIN DEPARTMENT

a). includes all employees not assigned to any department

b). includes all departments having no employee

c). includes only those employees who are assigned a department d) none of these **ANSWER :A**

121). Which of the following SQL commands can be used to modify existing data in a database table?

a) MODIFY b) UPDATE c) CHANGE d) NEW **ANSWER : B**

*122). Let the statement

SELECT * FROM nameList;

return 10 rows. The statement

SELECT * FROMnameList WHERE ROWNUM > 5;

will return

(a) 4 rows b) 5 rows c) 6 rows d) none of these **ANSWER : D**

*123). The SELECT statement

SELECT 'Hi' FROM DUAL WHERE NULL IN (NULL) ; outputs,

a). TRUE b). FALSE C). 'Hi' d). nothing **ANSWER : D**

124). The SQL statement

SELECT TRUNC (45.926, -2) FROM DUAL;

a). is illegal (b) prints 45 (c) prints 45.92 d). prints 0 **ANSWER :D**

*125). The SELECT statement

SELECT 'Hi' FROM DUAL

WHERE NULL is NULL; outputs,

a) Hi b) FALSE c) TRUE d) nothing **ANSWER :A**

*126). Consider a database table T containing two columns X and Y each of type integer. After the creation of the table, one record (X = 1, Y = l) is inserted in the table.

Let MX and MY denote the respective maximum values of X and Y among all records in the table at any point in time. Using MX and MY, new records are inserted in the table 128 times with X and Y values being MX+ 1, 2* MY + I respectively. It may be noted that each time after the insertion, values of MX and MY change.

What will be the output of the following SQL query after the steps mentioned above are carried out?

SELECT Y FROM T WHERE X = 7;(GATE 2011)

(a) 127 b) 255 c) 129 d). 257 **ANSWER : A**

*127). A database table named Loan Records is given below.

Borrower	Bank-Manager	Loan-Amount
Ramesh	Sunderajan	10000.00
Suresh	Ramgopal	5000.00
Mahesh	Sunderajan	7000.00

What is the output of the following SQL query?(GATE 2011)

```
SELECT count ( * )
FROM (
        (SELECT Borrower, Bank Manager FROM Loan Records)   AS     S
         NATURAL JOIN
         (SELECT Bank Manager,  Loan_Amount     FROM  Loan_Records  As T
);
```

A). 3 b). 9 c). 5 d). 6 **ANSWER :C**

*128). Which of the following statements are TRUE about an SQL query?

P: An SQL query can contain a HAVING clause even if it does not have a GROUP BY clause

Q: An SQL query can contain a HAVING clause only if it has a GROUP BY clause

R : All attributes used in the GROUP BY clause must appear in the SELECT clause

S : Not all attributes used in the GROUP BY clause need to appear in the SELECT clause
(GATE 2012)

(a) P and R (b) P and S (c) Q and R (d) Q and S **ANSWER :D**

Consider the following relations A, B, C

A

ID	Name	Age
12	Arun	60
15	Shreya	24
99	Rohit	11

B

ID	Name	Age
15	Shreya	24
25	Hari	40
98	Rohit	20
99	Rohit	11

C

ID	Phone	Area
10	2200	02
99	2100	01

129). How many tuples does the result of the following SQL query contain?

```
SELECT   A.Id
  FROM     A
WHERE A.Age>   ALL ( select   B. Age
                                FROM      B
                              WHERE    B.Name  = 'Arun');
```

a). 4 b). 3 c).0 d). 1 **ANSWER :B**