Consider the following XML document that contains information on a XML file

```xml
<?xml version="1.0" encoding="UTF-8"?>
<books>
  <book category="JAVA">
    <title lang="en">Learn Java in 24 Hours</title>
    <author>Robert</author>
    <year>2005</year>
    <price>30.00</price>
  </book>
  <book category="DOTNET">
    <title lang="en">Learn .Net in 24 hours</title>
    <author>Peter</author>
    <year>2011</year>
    <price>40.50</price>
  </book>
  <book category="XML">
    <title lang="en">Learn XQuery in 24 hours</title>
    <author>Robert</author>
    <author>Peter</author>
    <year>2013</year>
    <price>50.00</price>
  </book>
  <book category="XML">
    <title lang="en">Learn XPath in 24 hours</title>
    <author>Jay Ban</author>
    <year>2010</year>
    <price>16.50</price>
  </book>
</books>
```

Note that the above XML document stored in Books(xText XML) table cre
single record.

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Choose the options that are not the properties of a transaction.

Select one or more:

☐ a. Availability

☐ b.
Partition tolerance

☐ c. Consistency

☐ d. Isolation

☐ e. Durability

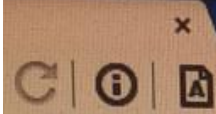# Online Exams

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Consider the following statements about transactions.

A - DBMS logs all actions so that it can undo the actions of aborted transactions.

B - DBMS are mainly responsible for ensuring transaction consistency.

C - A committed transaction is always reflected in the database.

Select the correct statements

Select one:

○ a. C only

○ b. B only

○ c. A and C only

○ d. A and B only

○ e. A only

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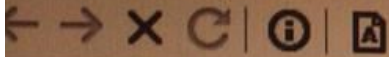
What is wrong about a XML document

A - XML Documents must have a root element

B - XML Attributes must be quoted

C - XML Elements must be properly nested

Select one or more:
- ☐ a. A Only
- ☐ b. C only
- ☐ c. B only
- ☐ d. B and C only
- ☐ e. A and B only

Question 2

Not yet answered

Marked out of 2.00

⚑ Flag question

What is the correct OR-SQL query that retrieve the values from VARRAY?

CREATE TYPE price_arr AS VARRAY(10) OF NUMBER(12,2)

/

CREATE TABLE pricelist (

pno integer,

prices price_arr

)

/

Select one or more:

☐ a. SELECT pno, p.REF.price_arr.price
FROM pricelist p

☐ b. SELECT pno, s.COLUMN_VALUE price
FROM pricelist p, TABLE(p.prices) s;

☐ c. SELECT pno, p.s.COLUMN_VALUE price
FROM pricelist p, TABLE(p.prices) s;

☐ d. SELECT pno, p.REF.price_arr.price
FROM pricelist p, TABLE(p.prices) REF

☐ e. SELECT pno, p. COLUMN_VALUE.price

FROM pricelist p

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Flag question

What is/are **wrong** about "REF" in Oracle ORDB?

Select one or more:

- a. Accessing the object referred to by a REF is called dereferencing the REF
- b. Oracle does not allow Unique or PRIMARY KEY constraints on REF columns
- c. A REF column can be assigned a null value
- d. REF is not a built-in data type in Oracle
- e. All of them

How differ Static Hashing from Extendible Hashing?

Select one or more:

☐ a. Performance is not affected when file is growing

☐ b. Primary nodes will delete if empty

☐ c. Does not create long overflow chains

☐ d. Less complex for implementation.

☐ e. Allow fixed number of primary buckets to store the records

ion 7

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ag question

Select **incorrect** statement/s about simple tree locking algorithm

Select one or more:

- a. In delete / insert processes, If child node is safe release all locks on ancestors.
- b. Searching data start from root and go down repeatedly, while holding S lock on child, then unlock parent
- c. Once child is locked by X lock, check if it is safe before release the locks.
- d. If node is full; it is safe to insert data and if node is half-full; it is safe to delete data.
- e. To delete data in nodes traverse the tree from bottom to up, while obtaining X locks as needed.

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≡ Quiz

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SECTION B

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What is the Oracle command to create a VARRAY TYPE?

Select one or more:

- a. Create ROW TYPE excharray AS varray(5) of varchar(12)
- b. Create TYPE excharray AS varray(5)
- c. Create TYPE excharray AS varray(5) of varchar(12)
- d. Create ROW TYPE excharray AS varray(5)
- e. Create ROW TYPE excharray AS of varchar(12)

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Flag question

Select correct statement/s about handling deadlocks in database systems.

Select one or more:

- a. To detect deadlock. Periodically check for cycles in the waits-for graph
- b. In deadlock prevention, priorities are assigned to transactions based on timestamps
- c. Wait-Die and Wait-wound are the two deadlock prevention mechanisms.
- d. When deadlock occurs, victim is the transaction which is going to wait.
- e. In wait –die, if the transaction that requires the property holds by other transaction have high priority, it will wait and die.

DECLARA

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SECTION A

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SECTION B

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What is the **incorrect** line in the following code?
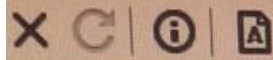
```
Line 1 <book>
Line 2 <Paper category="Web">
Line 3 <bname>XML Tutorials</bname>
Line 4 <pages>200</pages>
Line 5 <price>800.00</Price>
Line 6 </book>
```

Select one or more:

- ☐ a. Line 5 only
- ☐ b. Line 3 and Line 4
- ☐ c. Line 2 and Line 5
- ☐ d. Line 1 and Line 5 only
- ☐ e. Line 2 Only

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question

Which one is **incorrect** on Indexing?

Select one or more:

☐ a. Clustering indexes made up with only primary keys.

☐ b. Secondary index has a key field

☐ c. Dense index facilitates to fast searching.

☐ d. Primary index has a key field

☐ e. Used to optimize the performance of access the data.

```
create type emp_t AS OBJECT(
    EMPNO CHAR(6),
    FIRSTNAME VARCHAR(12),
    LASTNAME VARCHAR(15),
    WORKDEPT REF dept_t,
    SEX CHAR(1),
    BIRTHDATE DATE,
    SALARY NUMBER(8,2)
)
```

```
create table OREMP of emp_t (
)
/
```

Select one or more:

- a.

  insert into OREMP values REF ORDEPT ('000010', 'Christine', 'Hass', 'Planning', 'F', '14-AUG-1953', 72750)

- b.

  insert into OREMP values REF ORDEPT('000010', 'Christine', 'Hass',
         (select ref(d) from ORDEPT d where d.DEPTNO = 'A00'), 'F', '14-AUG-1953', 72750))

- c.

  insert into OREMP values (EMP_T ('000010', 'Christine', 'Hass',
         (select ref(d) from ORDEPT d where d.DEPTNO = 'A00'), 'F', '14-AUG-1953', 72750))

- d.

  insert into OREMP values(EMP_T('000010', 'Christine', 'Hass',
         (select Dname from ORDEPT d where d.DEPTNO = 'A00'), 'F', '14-AUG-1953', 72750))

- e.

  insert into OREMP values REF ORDEPT('000010', 'Christine', 'Hass',
         (select Dname from ORDEPT d where d.DEPTNO = 'A00'), 'F', '14-AUG-1953', 72750))

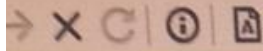# Online Exams

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What is/ are correct about VARRAY?

Select one or more:

☐ a. Can't be used as the data-type of a column of a relational table.

☐ b. VARRAY is a kind of data type that can't initializing as a TYPE.

☐ c. Creating an array type does allocate space.

☐ d. Can be used an attribute data-type in an object type definition.

☐ e. VARRAY is not only a type definition

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Question 20

Not yet answered

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⚑ Flag question

Assume you have 5 buffer pages to sort 72 page files. Calculate the cost with external merge so

Select one:

○ a. 87

○ b. 75

○ c. 576

○ d. 432

○ e. 216
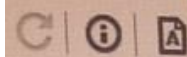
Consider the following script.

```
CREATE TYPE Child_t AS OBJECT (
name char(20),
addr   varchar(50)
)
/
CREATE TYPE ChildTableType AS TABLE OF Child_t
/
CREATE TABLE Employee (
name char(30),
Job char(50),
Child_details ChildTableType
)
.....
```

Last line of the Employee table is.

Select one or more:

- a. NESTED TABLE Child_details STORE AS e.Child_table UNDER Employee e:
- b. NESTED TABLE Child_details STORE AS e. Child_table UNDER Employee e:
- c. NESTED TABLE Child_details STORE REF AS Child_table:
- d. NESTED TABLE Child_details STORE REF AS Child_table UNDER Employee:
- e. NESTED TABLE Child_details STORE AS Child_table:
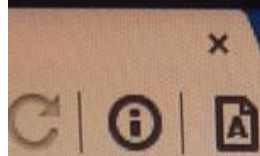
An object in ORDB can be containing

red

Select one:

- a. Attributes

ion

- b. Name identifies

- c. a, b and c

- d. a and b only

- e. Methods

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on 17

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Choose inappropriate rule(s) for Strict 2PL protocol.

Select one or more:

- ☐ a. Each transaction must obtain an X lock on object before writing
- ☐ b. When transaction completes, all locks held by transaction are released.
- ☐ c. None of the Them
- ☐ d. If a transaction holds an X lock on an object, no other transaction can get a lock on that object.
- ☐ e. Each transaction must obtain an X lock on object before reading

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Question 18

Not yet answered

Marked out of 2.00

⚑ Flag question

_____ is a special case of _____ for which an index support for efficient implementation of predicate lock.
Select appropriate word sequence for spaces.

Select one or more:

☐ a. Index locking, predicate locking

☐ b. Dynamic indexing, index locking

☐ c. Predicate locking, index locking

☐ d. Index locking, database locking

☐ e. Predicate locking, database locking

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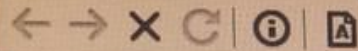
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Question 19

Not yet answered

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2.00

⚑ Flag question

Select the mechanism(s) that can be avoided the phantom problem in dynamic databases?

Select one or more:

☐ a. Write ahead Locking

☐ b. Multiple granularity locking

☐ c. Index locking

☐ d. Strict 2PL locking

☐ e. Simple Tree Locking Algorithm

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question

What is/are **not** features of well formed XML document?

Select one or more:

☐ a. XML tags are case sensitive

☐ b. None of the them

☐ c. All tags should be properly nested

☐ d. Empty tags are not necessary to close with a forward slash

☐ e. Every start tag should end with an end tag

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How to comment in XML?

Select one or more:

- a. <! -- -->
- b. <!- -?
- c. <!-- --!>
- d. < ?- - ?
- e. <!- -?>

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What is/are **not** table joining algorithms in query processing

Select one or more:

- [ ] a. Page oriented Nested loop join
- [ ] b. Block nested loop join
- [ ] c. Index nested loop join
- [ ] d. Simple Nested loop join
- [ ] e. External merge sort algorithm
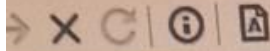
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Which includes for a "Query Block"?

Select one or more:

- a. SELECT - FROM - WHERE - GROUP BY - ORDER BY
- b. SELECT - FROM - WHERE
- c. SELECT - FROM - WHERE - GROUP BY - ORDER BY - HAVING
- d. SELECT - FROM - WHERE - ORDER BY
- e. SELECT - FROM - WHERE - GROUP BY

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Which combination is true?

Select one or more:

- [ ] a. Sequential File - sorted records
- [ ] b. Hashed file - good for equality selection
- [ ] c. Heap file - records inserted to the begin of file
- [ ] d. B+ Tree file - Dynamic Tree index
- [ ] e. Cluster file - cost effective when search records on range selections.
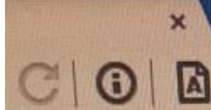
What is **not** important to decide best query execution plan

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Select one or more:

- [ ] a. Execution time
- [ ] b. Number of disk accesses
- [ ] c. The time rollback sessions have occurs.
- [ ] d. Communication costs in distributed or parallel database systems
- [ ] e. Number of steps follow to get the estimation

Question 29

Not yet answered

Marked out of 2.00

Flag question

Consider the given statements about transactions scheduling.

A- Serializable schedule preserves consistency

B- In equivalent schedules; the effect of one transaction on database is identical to the effect of other transaction.

C- In serial schedule there are interleave actions of different transactions.

Select the **incorrect** statements.

Select one or more:

- a. A only
- b. A, C only
- c. C only
- d. B only
- e. A,B, C

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SECTION II

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Which is/are NOT a rule of creating B+ tree?

Select one or more:

- ☐ a. If search value < node value, then point to the left side
- ☐ b. If search value < node value, then point to the right side
- ☐ c. Root node has minimum one value
- ☐ d. If search value = node value, then point to left side.
- ☐ e. If search value > node value, then point to right side.
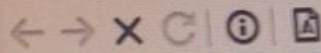
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A required parameter (attempt) was missing

More information about this error

Continue

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g question

What is/are the types of built in function in Xml?

A - Number Related

B - Sequence Related

C - Error handling and trapping

D - String related

Select one or more:

- a. A, C, D only
- b. C only
- c. All of them
- d. B, C and D only
- e. A and C only

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question

Which of the following is true relate to Object Relational Database Systems?

Select one:

- a. They have the ability to store complex data types.
- b. They are most useful for traditional, two-dimensional database tables.
- c. They are used to create tables without constraints.
- d. All of them.
- e. They are overtaking RDBMS for all applications.

```
        <price>50.00</price>
    </book>
    <book category="XML">
        <title lang="en">Learn XPath in 24 hours</title>
        <author>Jay Ban</author>
        <year>2010</year>
        <price>16.50</price>
    </book>
</books>
```

Note that the above XML document stored in Books(xText XML) table created in MS SQL Server and it contains an only single record.

Write an XQuery (FLWOR) expression to retrieve the *titles* of those books with a *price* greater than 30.

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Consider the following statements,

A - Let clause is **not** the convenient way to bind a variable

B - Where clause can used to filter results

C - For and Let can be repeated and combined

What is/are correct from above statements

Select one or more:

- ☐ a. A and B only
- ☐ b. A only
- ☐ c. B and C only
- ☐ d. A and C only
- ☐ e. B only

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Question 29

Not yet answered

Marked out of 2.00

⚑ Flag question

Consider the given statements about transactions scheduling.

A- Serializable schedule preserves consistency

B- In equivalent schedules: the effect of one transaction on database is identical to the effect of other transaction.

C- In serial schedule there are interleave actions of different transactions.

Select the **incorrect** statements.

Select one or more:

- ☐ a. A only
- ☐ b. A, C only
- ☐ c. C only
- ☐ d. B only
- ☐ e. A,B, C

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