

0/10 Questions Answered

Vitamin 13

STUDENT NAME

Q1 JSON

5 Points

Q1.1

1 Point

Online Transaction Processing (OLTP) workloads are categorized by which of the following?

- ☐ High numbers of transactions executed by large numbers of users
- ☐ Read-only workloads characterized by queries that typically touch a large amount of data
- ☐ Read-write workloads that contain a single query which locks a lot of resources
- ☐ Transactions that need to be connected to the internet to run to completion

Q1.2

1 Point

The CAP theorem proves that it is impossible for a distributed system to simultaneously provide more than two of the three (CAP) properties. What are the CAP properties?

☐ Consistency☐ Coherence☐ Atomicity☐ Availability☐ Partition Tolerance☐ Performance ComplianceSave Answer**Q1.3**

1 Point

Both XML and JSON are examples of which of the following?

☐ Binary data formats☐ Tabular data formats☐ Nested or hierarchical data formats☐ Semi-structured data☐ Unstructured data☐ None of the AboveSave Answer**Q1.4**

1 Point

Which of the following are true regarding JSON?

- ☐ Requires predefined schema
- ☐ JSON arrays are not ordered
- ☐ Self-describing
- ☐ Can be used as a data type in a RDBMS
- ☐ Can always be mapped to a relation
- ☐ None of the Above

Save Answer

Q1.5

1 Point

Suppose we have the following relation called `student`:

name	school
Joe	UC Berkeley
Bob	UCLA
Emma	NULL

Based on the mapping from lecture, which of the following is the JSON equivalent?

A:

```
{"name": ["Joe", "Bob", "Emma"], "school": ["UC Berkeley", "UCLA"]}
```

B:

```
{ "student":  
  [{ "name": "Joe", "school": "UC Berkeley",  
    { "name": "Bob", "school": "UCLA" }  
    { "name": "Emma" } ]  
}
```

C:

```
[ "student":  
  [{ "name": "Joe", "school": "UC Berkeley",  
    { "name": "Bob", "school": "UCLA" }  
    { "name": "Emma" } ]  
]
```

D:

```
{ "student":  
  { "name": [ "Joe", "Bob", "Emma" ], "school": [ "UC Berkeley", "UCLA" ] }  
}
```

E:

```
{ "student":  
  { "name": [ "Joe", "Bob", "Emma" ], "school": [ "UC Berkeley", "UCLA", NU  
  }
```

- ☐ A
- ☐ B
- ☐ C
- ☐ D
- ☐ E
- ☐ None of the Above

Save Answer

Q2 MQL Queries

5 Points

Suppose we have two MongoDB collections: `teams` and `standings`.
The first row of each collection is shown below:

`teams`

```
{
  "_id" : ObjectId("5fb6f46fc0d3b5f3c64b4e12"),
  "teamId" : 1,
  "city" : "San Francisco",
  "name" : "Giants",
  "players" : ["Buster Posey", "Brandon Belt", "Brandon Crawfo"]
}
```

`standings`

```
{
  "_id" : ObjectId("6fc6f57gc0d3j5f3c64b5f23"),
  "teamId" : 1,
  "league" : "National",
  "division" : "West",
  "standings": {"wins": 4, "losses": 3}
}
```

Q2.1

1 Point

Which of the following queries would find the teams with more than 3 wins?

- ☐ `db.standings.find({"standings.wins" : {$gt:3}})`
- ☐ `db.standings.find({"standings" : {"wins" : {$gt:3}}})`
- ☐ `db.standings.find({"standings" : {"wins" : {$gt:3}}})`
- ☐ `db.standings.find({"wins" : {"standings" : {$gt:3}}})`

Save Answer

Q2.2

1 Point

Which of the following queries would find information regarding the team Mike Trout currently plays on?

- ☐ `db.teams.find({"players":["Mike Trout"]})`
- ☐ `db.teams.find({"players":"Mike Trout"})`
- ☐ `db.teams.find({"players.contains":"Mike Trout"})`
- ☐ `db.teams.find({"players":{"$elemMatch : "Mike Trout"}})`
- ☐ `db.teams.find({"players":{"$elemMatch : {$eq:"Mike Trout"}}})`
- ☐ None of the Above

Save Answer**Q2.3**

1 Point

Which of the following queries would find the total number of wins in the each league?

A:

```
db.standings.aggregate([{$group: {_id:"$league", totalWins:{$sum: "sta
```

B:

```
db.standings.aggregate([{$group: {_id:"$league", totalWins:{$sum: "$st
```

C:

```
db.standings.aggregate([{$group: {_id:"$league", totalWins:{$sum:
{"$standings" : "wins"}}}}])`
```

D:

```
db.standings.aggregate([{$group: {_id:"$league", {$sum: "$standings.wi
```

- ☐ A
- ☐ B
- ☐ C
- ☐ D

Save Answer

Q2.4

1 Point

Which of the following queries would find a list of all players for the team with teamId 5? If there are 5 players for the team with teamId 5, then there should be 5 separate rows.

- ☐ `db.teams.aggregate([{$find: {teamId : {$eq:5}}]})`
- ☐ `db.teams.aggregate([{$match: {teamId : {$eq:5}}]})`
- ☐ `db.teams.aggregate([{$match: {teamId : {$eq:5}}}, {$unwind: "$play`
- ☐ `db.teams.aggregate([{$unwind:"$players"}, {$match: {teamId : {$eq:`
- ☐ `db.teams.aggregate([{$find: {teamId : {$eq:5}}}, {$unwind: "$playe`
- ☐ None of the Above

Save Answer

Q2.5

1 Point

Which of the following queries find the total number of wins for teams located in San Francisco?

A:

```
db.teams.aggregate([{$match: {location : {$eq:"San Francisco"}}},
{$lookup : {from:"standings", localField:"teamId",
foreignField:"teamId", as: "results"}},
{$group: {_id: "teamId", totalWins:{$sum: {$first:
"$results.standings.wins"}}}}])
```

B:

```
db.teams.aggregate([{$match: {location : {$eq:"San Francisco"}}},
{$lookup : {from:"standings", localField:"teamId",
foreignField:"teamId", as: "results"}},
{$group: {_id: null, totalWins:{$sum: {$first:
"$results.standings.wins"}}}}])
```

C:

```
db.teams.aggregate([{$match: {location : {$eq:"San Francisco"}}},
{$lookup : {from:"standings", localField:"teamId",
foreignField:"teamId", as: "results"}},
{$group: {_id: null, totalWins:{$sum: {$first:
"$results.wins"}}}}])
```

D:

```
db.teams.aggregate([{$group: {_id: null, totalWins:{$sum: {$first:
"$results.wins"}}}}])
```

☐ A☐ B☐ C☐ DSave AnswerSave All AnswersSubmit & View Submission >

