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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Data Base Management System (course)

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Week 5 : Assignment 5

The due date for submitting this assignment has passed.

Due on 2022-09-28, 23:59 IST.

Assignment submitted on 2022-09-27, 07:20 IST

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1)   **2 points**

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Which of the following specifies how an application server communicates with the external web?

a) HTTP

b) SMTP

c) Web browser

d) CGI

  ◉ a)
  ○ b)
  ○ c)
  ○ d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
d)

2)   **2 points**

Course outline

How does an NPTEL online course work? ()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 4 ()

Week 5 ()

○ Lecture 21 : Application Design and Development (unit? unit=55&lesson=56)

○ Lecture 22 : Application Design and Development (contd.) (unit? unit=55&lesson=57)

Identify the incorrect statement(s) from the following?

a) **Javascript** and **AJAX** technology are used to design server-side applications.

b) **Servlet** runs inside application servers.

c) **JDBC** connections always stay connected.

d) **Java Server Page** is platform-independent.

- [ ] a)
- [ ] b)
- [x] c)
- [ ] d)

Partially Correct.
Score: 1
Accepted Answers:
a)
c)

3)   *2 points*

What will be the availability of the Redundant Arrays of Independent Disks (RAID) system, if the $\texttt{Mean Time Between Failure (MTBF)}$ is 25 days and the $\texttt{Mean Time To Repair (MTTR)}$ the system is 18 hours?

a) 97.09%

b) 96.02%

c) 58.14%

d) 30.25%

- (•) a)
- ( ) b)
- ( ) c)
- ( ) d)

Yes, the answer is correct.
Score: 2
Accepted Answers:
a)

4)   *2 points*

Suppose there is a 256 gigabyte flash storage system, with 4 kilobyte page size. The address of each page is stored in the memory as an array called a flash translation table. If the size of the flash translation table is 512 megabytes, what is the maximum address size of a page?

a) 8 bytes

b) 16 bytes

c) 32 bytes

d) 64 bytes

**Problem
Solving
Session ()**

○ a)

○ b)

○ c)

○ d)

Yes, the answer is correct.
Score: 2

Accepted Answers:
a)

5)   *2 points*

Identify the correct statement(s) about the following RAID levels?

a) RAID 0 provides byte-level striping with mirroring.

b) RAID 1 provides disk mirroring without striping.

c) RAID 3 provides byte-level striping with dedicated parity checking.

d) RAID 5 provides Byte-level striping without parity bits.

☐ a)

☐ b)

☑ c)

☐ d)

Partially Correct.
Score: 1

Accepted Answers:
b)
c)

6)   *2 points*

Suppose, there is a 512 gigabyte magnetic disk with 256 surfaces and 1024 tracks per surface.
If it has 512 sectors in each track, what will be the size of one sector?

a) 512 bytes

b) 1 KB

c) 2 KB

d) 4 KB

○ a)

○ b)

○ c)

● d)

Yes, the answer is correct.
Score: 2

Accepted Answers:
d)

7)   **2 points**

Which of the following layer is not present in a typical 3-tier Mobile Application architecture?

a) Application layer

b) Presentation layer

c) Business layer

d) Data layer

⦿ a)

◯ b)

◯ c)

◯ d)

Yes, the answer is correct.
Score: 2
Accepted Answers:
a)

8)   **2 points**

Consider a database management system that organizes its records of a file in sequential order and one block contains only whole records. A file containing faculty records has 824 records and each record is 40 bytes long. If the disk block size is 1 kilobyte, and the block pointer size is 8 bytes, how many blocks will be required to store the faculty file?

a) 25

b) 32

c) 33

d) 42

◯ a)

◯ b)

⦿ c)

◯ d)

Yes, the answer is correct.
Score: 2
Accepted Answers:
c)

9)   **2 points**

In a Drawing Competition, participants individually can enroll their names for the competition. There are many groups in the competition depending on the age of the participants. A participant can participate in only one group and a group consists of multiple participants. Each group has a unique name (GName) and a participant also has a unique id. The result (score) of each group is maintained separately. Which of the following statement(s) are incorrect?

a) Entity Group does not have any primary key.

b) Participate is a one-to-many relationship between Group and Participants.

c) Participate is a many-to-many relationship between Group and Participant.

d) GName may be the foreign key of Participate relation between Group and Participant.

- ☑ a)
- ☐ b)
- ☑ c)
- ☐ d)

Yes, the answer is correct.
Score: 2

Accepted Answers:
a)
c)

10)   **2 points**

Identify the correct statement(s) from the following.

a) Dynamic hashing file organization is used to store multiple relations in one file.

b) In sequential file organization, records are ordered by a search key.

c) Heap file organization is used to store related records on the different block to minimize I/O.

d) In multitable clustering file organization, records are ordered by a search key.

- ◯ a)
- ◉ b)
- ◯ c)
- ◯ d)

Yes, the answer is correct.
Score: 2

Accepted Answers:
b)