Code No: R05410308 |R05| |Set No. 2|

IV B.Tech I Semester Examinations,NOVEMBER 2010
SELECTED TOPICS IN COMPUTER SCIENCE
Mechanical Engineering

Time: 3 hours   Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks
⋆ ⋆ ⋆ ⋆ ⋆

1. Consider the following table and answer the questions below.

Sid	Sname	Rating	Age
18	Jones	3	30.0
41	Jonah	6	56.0
22	Ahab	7	44.0
63	Moby	Null	15.0

   (a) Write SQL queries to compute the average rating, using AVG, the sum of the ratings, using SUM, and the number of ratings, using COUNT.

   (b) Find the names of sailors with a higher rating than all sailors with age<21.

   (c) Find the names of sailors whose rating is less than the average rating just computed and with age<21.

   (d) Should the rating attribute be the primary key for that relation. If NOT, explain why?   [16]

2. Define the five process maturity levels and explain each.   [16]

3. What are algorithms used for the minimum cost spanning tree? Illustrate with an example.   [16]

4. (a) What are views and why are they used? Explain about destroying and altering the views with an example.

   (b) Consider the data
       Emp (eid: integer, ename: string, age: integer, salary: real)
       Works (eid: integer, did: integer, pct_time: integer)
       Dept (did: integer, budget: real, managerid: integer)
       Create a view for the senior emp, the view must show the name of employee, age, salary and the pct_time of each employee. And also create nested view which is drawn from the view.   [8+8]

5. (a) Prove that the average case time complexities of Quick sort is O(nlogn).

   (b) Write an algorithms for quick sort.   [10+6]

6. List the classic software engineering models. Explain one of them in detail.
                                                                            [4+12]

7. Explain the following commands with syntax

1

(a) more

(b) tee

(c) diff

(d) cpio.   [4+4+4+4]

8. Create a file, file1 using cat command and copy file1 to file2 using cp command check the contents of file1 and file2 using wc and comment.   [16]

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FIRSTRANKER

Code No: R05410308 **R05** **Set No. 4**

IV B.Tech I Semester Examinations,NOVEMBER 2010
SELECTED TOPICS IN COMPUTER SCIENCE
Mechanical Engineering

Time: 3 hours Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks
⋆ ⋆ ⋆ ⋆ ⋆

1. List the classic software engineering models. Explain one of them in detail.
[4+12]

2. Consider the following table and answer the questions below.

Sid	Sname	Rating	Age
18	Jones	3	30.0
41	Jonah	6	56.0
22	Ahab	7	44.0
63	Moby	Null	15.0

(a) Write SQL queries to compute the average rating, using AVG, the sum of the ratings, using SUM, and the number of ratings, using COUNT.

(b) Find the names of sailors with a higher rating than all sailors with age<21.

(c) Find the names of sailors whose rating is less than the average rating just computed and with age<21.

(d) Should the rating attribute be the primary key for that relation. If NOT, explain why? [16]

3. Define the five process maturity levels and explain each. [16]

4. (a) What are views and why are they used? Explain about destroying and altering the views with an example.

(b) Consider the data
Emp (eid: integer, ename: string, age: integer, salary: real)
Works (eid: integer, did: integer, pct_time: integer)
Dept (did: integer, budget: real, managerid: integer)
Create a view for the senior emp, the view must show the name of employee, age, salary and the pct_time of each employee. And also create nested view which is drawn from the view. [8+8]

5. What are algorithms used for the minimum cost spanning tree? Illustrate with an example. [16]

6. Create a file, file1 using cat command and copy file1 to file2 using cp command check the contents of file1 and file2 using wc and comment. [16]

7. (a) Prove that the average case time complexities of Quick sort is O(nlogn).

3

R05 **Set No. 4**

    (b) Write an algorithms for quick sort.   [10+6]

8. Explain the following commands with syntax

    (a) more

    (b) tee

    (c) diff

    (d) cpio.   [4+4+4+4]

⋆ ⋆ ⋆ ⋆ ⋆

FIRSTRANKER

Code No: R05410308 **R05** **Set No. 1**

IV B.Tech I Semester Examinations,NOVEMBER 2010
SELECTED TOPICS IN COMPUTER SCIENCE
Mechanical Engineering

Time: 3 hours   Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks
⋆⋆⋆⋆⋆

1. (a) Prove that the average case time complexities of Quick sort is O(nlogn).

   (b) Write an algorithms for quick sort.   [10+6]

2. Define the five process maturity levels and explain each.   [16]

3. Create a file, file1 using cat command and copy file1 to file2 using cp command check the contents of file1 and file2 using wc and comment.   [16]

4. Explain the following commands with syntax

   (a) more

   (b) tee

   (c) diff

   (d) cpio.   [4+4+4+4]

5. Consider the following table and answer the questions below.

Sid	Sname	Rating	Age
18	Jones	3	30.0
41	Jonah	6	56.0
22	Ahab	7	44.0
63	Moby	Null	15.0

   (a) Write SQL queries to compute the average rating, using AVG, the sum of the ratings, using SUM, and the number of ratings, using COUNT.

   (b) Find the names of sailors with a higher rating than all sailors with age<21.

   (c) Find the names of sailors whose rating is less than the average rating just computed and with age<21.

   (d) Should the rating attribute be the primary key for that relation. If NOT, explain why?   [16]

6. List the classic software engineering models. Explain one of them in detail.

                                                                             [4+12]

7. What are algorithms used for the minimum cost spanning tree? Illustrate with an example.   [16]

8. (a) What are views and why are they used? Explain about destroying and altering the views with an example.

   (b) Consider the data
   Emp (eid: integer, ename: string, age: integer, salary: real)
   Works (eid: integer, did: integer, pct_time: integer)
   Dept (did: integer, budget: real, managerid: integer)
   Create a view for the senior emp, the view must show the name of employee, age, salary and the pct_time of each employee. And also create nested view which is drawn from the view. [8+8]

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FIRSTRANKER

6

Code No: R05410308 **R05** **Set No. 3**

IV B.Tech I Semester Examinations,NOVEMBER 2010
SELECTED TOPICS IN COMPUTER SCIENCE
Mechanical Engineering

Time: 3 hours Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks
⋆ ⋆ ⋆ ⋆ ⋆

1. List the classic software engineering models. Explain one of them in detail.
   [4+12]

2. What are algorithms used for the minimum cost spanning tree? Illustrate with an example. [16]

3. Explain the following commands with syntax

   (a) more

   (b) tee

   (c) diff

   (d) cpio. [4+4+4+4]

4. Define the five process maturity levels and explain each. [16]

5. (a) What are views and why are they used? Explain about destroying and altering the views with an example.

   (b) Consider the data
   Emp (eid: integer, ename: string, age: integer, salary: real)
   Works (eid: integer, did: integer, pct_time: integer)
   Dept (did: integer, budget: real, managerid: integer)
   Create a view for the senior emp, the view must show the name of employee, age, salary and the pct_time of each employee. And also create nested view which is drawn from the view. [8+8]

6. Create a file, file1 using cat command and copy file1 to file2 using cp command check the contents of file1 and file2 using wc and comment. [16]

7. (a) Prove that the average case time complexities of Quick sort is O(nlogn).

   (b) Write an algorithms for quick sort. [10+6]

8. Consider the following table and answer the questions below.

Sid	Sname	Rating	Age
18	Jones	3	30.0
41	Jonah	6	56.0
22	Ahab	7	44.0
63	Moby	Null	15.0

R05 Set No. 3

(a) Write SQL queries to compute the average rating, using AVG, the sum of the ratings, using SUM, and the number of ratings, using COUNT.

(b) Find the names of sailors with a higher rating than all sailors with age<21.

(c) Find the names of sailors whose rating is less than the average rating just computed and with age<21.

(d) Should the rating attribute be the primary key for that relation. If NOT, explain why? [16]

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