Questions

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Multiple Choice

1.0/1.0 point (graded)

At time 0, process P1 is executing. At time 3, the time slice of P1 is expired. So P1 is interrupted and sent to ready queue. Process P2 is then loaded into CPU for execution. At time 6, P2 has terminated. So, P1 is selected again for execution. At time 9, again P1's time slice is ended. And process P3 is loaded into CPU.
So, how many context switching occurs in the above scenario -

○ 1

○ 2

● 3

○ 4

✓

Submit You have used 1 of 1 attempt

Show Answer

Question 2

5.0/5.0 points (graded)

Assume, the system has 5 processes. Consider the following events occurring at times-

```
At time 5: P1 executes a command to read from disk.
At time 15: P5 is interrupted due to time slice expiry.
At time 18: P7 executes a command to write to disk.
At time 20: P3 executes a command to read from disk.
At time 24: P5 executes a command to write to disk.
At time 28: P5 is swapped out and in.
At time 33: An interrupt occurs from disk unit: P3’s read is complete.
At time 36: An interrupt occurs from disk unit: P1’s read is complete.
At time 37: P9 is executing.
At time 39: P9 terminates.
```

Now **At time 38, Identify** at which state (i.e. ready, running, waiting etc) each process is in. -

The state of process *P1* is :

Ready ✓ **Answer:** Ready

The state of process *P3* is :

Ready ✓ **Answer:** Ready

The state of process *P5* is :

Ready ✓ **Answer:** Ready

The state of process *P7* is :

Waiting ✓ **Answer:** Waiting

The state of process *P9* is :

Running ✓ **Answer:** Running

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Show Answer

Answers are displayed within the problem

Question 2

3.0/4.0 points (graded)

Consider the following pseudo code snippet:

```
static int tax = 5;
static string department = "CSE";
public double getSalary(int baseSalary){
    int salary = (baseSalary * 5)/100;
    return salary;
}
String[] mobileNumbers = new String[3];
```

Now, after loading the program into memory, **Identify** at which section of the process memory, the variables of the above code snippet will reside -

The variable *tax* will reside in :

Data ✓ **Answer:** Data

The variable *mobileNumbers* will reside in :

Data ✓ **Answer:** Data

The variable *baseSalary* will reside in :

Program Counter ✗ **Answer:** Stack

The variable *salary* will reside in :

Stack ✓ **Answer:** Stack

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Answers are displayed within the problem

amdahl's law

2.0/2.0 points (graded)

Suppose, you need to configure a system in which 77% should run serially and 23% will run in parallel with 4 cores. How much speedup will you get ?

1.208 ✓ **Answer:** 1.21

1.208

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Answers are displayed within the problem

Question 5 - SRTF (Marks: 5)

5.0/5.0 points (graded)

Marks for this question: 5 marks + partial marks for gantt chart in PDF

Consider the information of following five processes -

Process	Arrival time	Burst time
P1	4	5
P2	4	9
P3	4	4
P4	2	6
P5	5	6

Now apply the **Preemtive Shortest Remaining Time First (SRTF)** scheduling alogorithm on the above given data.

*Insert the **Average Waiting Time** (only integer value, no decilam points. For example if your ans is 25.8 or 25.1, insert 25 only)*

8 ✓ **Answer:** 8

*Insert the **Average Turnaround Time** (only integer value, no decilam points. For example if your ans is 25.8 or 25.1, insert 25 only)*

14 ✓ **Answer:** 14

Submit You have used 1 of 2 attempts

Show Answer

Answers are displayed within the problem

Question 6 - Round Robin (Marks: 5)

5.0/5.0 points (graded)

Marks for this question: 5 marks + partial marksf for gantt chart in PDF

Consider the information of following five processes -

Process	Arrival time	Burst time
P1	0	5
P2	2	8
P3	5	3
P4	3	7
P5	5	1

Now apply the **Round Robin (q = 4)** scheduling alogorithm on the above given data.

*Insert the **Average Waiting Time** (only integer value, no decilam points. For example if your ans is 25.8 or 25.1, insert 25 only)*

10 ✓ **Answer:** 10

*Insert the **Average Turnaround Time** (only integer value, no decilam points. For example if your ans is 25.8 or 25.1, insert 25 only)*

15 ✓ **Answer:** 15

Submit You have used 1 of 2 attempts

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Answers are displayed within the problem

(Marks: 3)

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