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Question 6
Not yet answered
Marked out of 1.0
Flag question

Which of the following two operations are provided by the IPC facility?

Select one:

- a. send & delete message
- b. write & delete message
- c. delete & receive message
- d. receive & send message



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Question 7

yet answered

Marked out of 1.0

Flag question

What is a Process Control Block?

Select one:

- a. Data Structure
- b. A secondary storage section
- c. Process type variable
- d. A Block in memory



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9
answered
out of 1.0
question

A major complication of concurrent processes

Select one:

- a. Shared Memory
- b. Inter process communication
- c. Kernel access
- d. Message passing

Moodle

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If a process fails, most operating system write the error information to a _____

Select one:

- a. log file
- b. another running process
- c. new file
- d. none of the mentioned

Moodle

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Which of the following are TRUE for direct communication?

Select one:

- a. A communication link is associated with exactly two processes
- b. A communication link can be associated with N number of processes ($N = \text{max. number of processes supported by system}$)
- c. Exactly two links exist between each pair of processes
- d. Exactly $N/2$ links exist between each pair of processes ($N = \text{max. number of processes supported by system}$)

Next page

Moodle



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The address of the next instruction to be executed by the current process is provided by the _____

Select one:

- a. Process stack
- b. Program counter
- c. Pipe
- d. CPU registers

Next



The state of a process is defined by _____

Select one:

- a. the current activity of the process
- b. the final activity of the process
- c. the activity just executed by the process
- d. the activity to next be executed by the process

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The child process completes execution, but the parent keeps executing, then the child process is known as

Select one:

- a. Dead
- b. Body
- c. Orphan
- d. Zombie

Next page

MacBook Air

F2

F3

F4

F5



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Question 16

Not yet answered
Marked out of 1.0

Flag question

True statement about layered approach

Select one:

- a. Difficult to debug X
- b. Information is not in restricted area X
- c. Changes done in one layer affects the other layers X
- d. Poor performance

NOT Sure



Question 17
yet answered
Marked out of 1.0
Flag question

What is the main disadvantage of spinlocks?

Select one:

- a. they are not sufficient for many processes
- b. they are unreliable sometimes
- c. they are too complex for programmers
- d. they are not sufficient for many processes

2
8



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ion 15
et answered
d out of 1.0
question

A semaphore is a shared integer variable

Select one:

- a. that can not be more than zero
- b. that can not be more than one
- c. that can not drop below zero
- d. that can not drop below one



Question 20

Not yet answered

Marked out of 1.0

Flag question

Select the instruction which is not privileged

Select one:

- a. Read the clock
- b. Turn off interrupt
- c. Clear timer
- d. Set value of the time

- Clear memory
- access I/O Device
- Issue a trap instruction



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RPC provides a(n) _____

on the client-side, a separate one for each remote procedure

Select one:

- a. stub
- b. process identifier
- c. name
- d. identifier

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In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of _____

Select one:

- a. parent process
- b. init process
- c. currently running process
- d. all process

Next page

MacBook Air

Moodle

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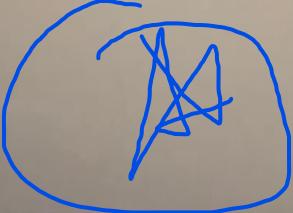
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1.0
n

There are 10 different processes running on a workstation. Idle processes are waiting for an input event in the input queue. Busy processes are scheduled with the Round-Robin time sharing method. Which out of the following quantum times is the best value for small response times, if the processes have a short runtime, e.g. less than 10ms?

Select one:

- a. $tQ = 45\text{ms}$
- b. $tQ = 50\text{ms}$
- c. $tQ = 40\text{ms}$
- d. $tQ = 15\text{ms}$



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23
Answered
of 1.0
Question

In operating system, each process has its own

Select one:

- a. Address space
- b. Open files
- c. Signal handlers
- d. All of the above



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Section 26
Not answered
1 out of 1.0
question

An un-interruptible unit is known as _____

Select one:

- a. Single
- b. Atomic
- c. Static
- d. None of the mentioned



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To differentiate the many network services a system supports _____ are used.

Select one:

- a. Sockets
- b. Service names
- c. Variables
- d. Ports



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ion 25

nt answered
d out of 1.0
question

Message passing system allows processes to _____

Select one:

- a. name the recipient or sender of the message
- b. communicate with each other without sharing the same address space
- c. communicate with one another by resorting to shared data
- d. share data

MacBook Air

F2

80



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If a process is executing in its critical section, then no other processes can be executing in their critical section.
What is this condition called?

Select one:

- a. mutual exclusion
- b. critical exclusion
- c. synchronous exclusion
- d. asynchronous exclusion

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MacBook Air





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Question 30
yet answered
0.0 out of 1.0
Flag question

The entry of all the PCBs of the current processes is in _____

Select one:

- a. Process Unit
- b. Program Counter
- c. Process Table
- d. Process Register

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Question 28

Not yet answered

Marked out of 1.0

Flag question

The child process can _____

Select one:

- a. never have another program loaded into it
- b. cannot have another program loaded into it
- c. never be a duplicate of the parent process
- d. be a duplicate of the parent process

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Question 2
Not yet answered
Marked out of 1.0
Flag question

Given the following set of processes with their arrival times and burst times, compute the average waiting time for processes for the round-robin (quantum = 3) scheduling.

Process	Arrival time	Burst time
A	0	8
B	1	5
C	5	2
D	8	1

Select one:

- a. 8 seconds
- b. 4 seconds
- c. 6 seconds
- d. 24 seconds
- e. None of the above

Handwritten notes:

Round Robin Scheduling Diagram:

```

    A | B | A | C | B | D | A | P | M | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | 
    0   3   6   9   11  13  14  16  18  20  22  24  26  28  30  32  34  36  38  40  42  44  46  48  50  52  54  56  58  60  62  64  66  68  70  72  74  76  78  80  82  84  86  88  90  92  94  96  98  100
    CT      +AT+           WT + TAT - BT
    16      16              8
    13      12              7
    11      6               4
    14      6               3
    
```

Avg WT = $\frac{24}{8} = 3$

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Question 2
Not yet answered
Marked out of 1.0
Flag question

Choose the correct statement:

Select one:

- a. Long-term scheduler selects which process should be sent out from the ready queue to the CPU
- b. Short-term scheduler is invoked very frequently
- c. CPU-bound process spends more time doing computations; therefore it's having many CPU bursts
- d. Ready Queue contains all the processes in the system which are newly created

Quiz navigation
Finish attempt...
Time left: 0:56:18
1 2 3 4 5 6
8 9 10 11 12 13
15 16 17 18 19 20

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Question 3
yet answered
Marked out of 1.0

Flag question

Which of the following are the states of a five state process model?

i) Running ii) Ready iii) New iv) Exit v) Destroy

Select one:

a. i, ii, iii, and iv only
 b. All i, ii, iii, iv and v
 c. i, ii, iv and v only
 d. i, ii, iii and v only

Next page

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Choose the correct statement

Select one:

a. Long-term scheduler selects which process should be sent out from the ready queue to the CPU
 b. Short-term scheduler is invoked very frequently
 c. CPU-bound process spends more time doing computations; therefore it's having many CPU bursts
 d. Ready Queue contains all the processes in the system which are newly created

Next page

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What is the function of the short-term scheduler?

Select one:

- a. It selects which process has to be brought into the ready queue.
- b. It selects which process has to be executed next and allocates CPU
- c. It selects which process to remove from memory by swapping next.
- d. All of the above.

Next page

it20180034 Ilangarathna D

Quiz navigation

Finish attempt ...

Time left 0:50:32

1	2	3	4
8	9	10	11
15	16	17	18

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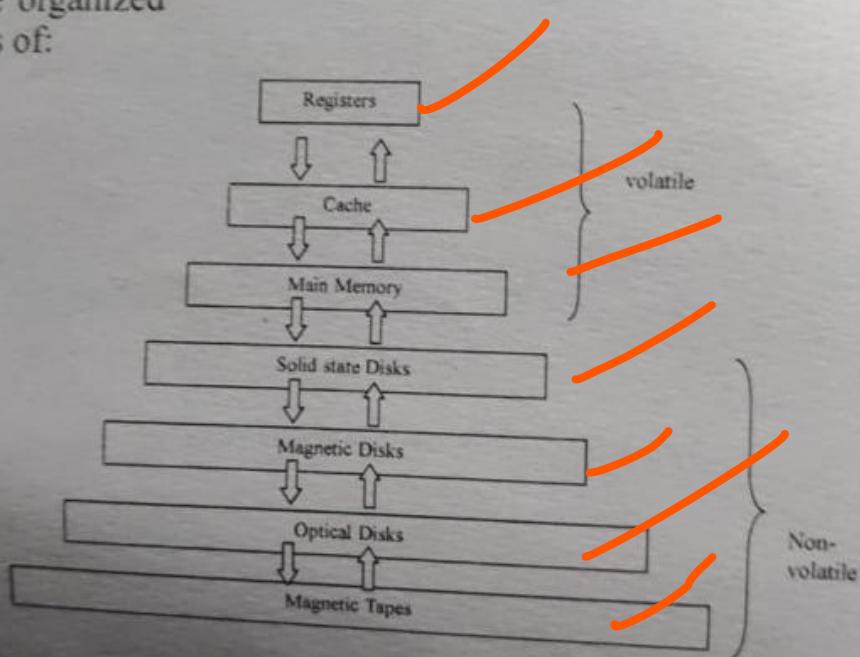
Storage Memory Hierarchy from top to bottom is,

Select one:

- a. Registers, Cache, Main memory, Electronic disk, Optical disk, Magnetic disk, Magnetic tapes
- b. Registers, Cache, Main memory, Electronic disk, Magnetic disk, Optical disk, Magnetic tapes
- c. Registers, Cache, Main memory, Magnetic disk, Optical disk, Magnetic tapes, Electronic disk
- d. Registers, Cache, Optical disk, Main memory, Magnetic disk, Magnetic tapes, Electronic disk

MEMORY STRUCTURE

Memory structures are organized hierarchically in terms of:



PERFORMANCE OF VARIOUS LEVELS OF STORAGE

1	2	3	4	5
registers	cache	main memory	solid state disk	magnetic disk
< 1 KB	< 16MB	< 64GB	< 1 TB	

The most optimal scheduling algorithm is

Select one:

- a. FCFS – First come First served
- b. SJF – Shortest Job First
- c. RR – Round Robin
- d. None of these

For real time operating systems, interrupt latency should be

Select one:

- a. minimal
- b. dependent on the scheduling
- c. maximum
- d. zero

on 7
yet answered
marked out of 1.0
Flag question

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What is the most suitable answer regarding the relationship between an **interrupt** and **system call**?

Select one:

- a. Request the operating system to allow user to wait for I/O completion
- b. An operating system is interrupt driven
- c. The operating system preserves the state of the CPU by storing registers and the program counter
- d. Program invokes a system call by generating an interrupt

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1 2
8 9
15 16 17

Question 6
yet answered
marked out of 1.0
Flag question

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If all processes are I/O bound, the ready queue will almost always be _____, and the Short term Scheduler will have a _____ to do.

Select one:

- a. empty, little
- b. full, little
- c. full, lot
- d. empty, lot

Next page

1 2
8 9
15 16 17



Question 10

Not yet answered

Marked out of 1.0

Flag question

Storage Memory Hierarchy from top to bottom is.

Select one:

- a. Registers, Cache, Main memory, Electronic disk, Magnetic disk, Optical disk, Magnetic tapes
- b. Registers, Cache, Main memory, Magnetic disk, Optical disk, Magnetic tapes, Electronic disk
- c. Registers, Cache, Optical disk, Main memory, Magnetic disk, Magnetic tapes, Electronic disk
- d. Registers, Cache, Main memory, Electronic disk, Optical disk, Magnetic disk, Magnetic tapes

Quiz navigation

Finish attempt

Time left 0:31:09

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	

Next page



Question 11

Not yet answered

Marked out of 1.0

Flag question

Storage systems organized in a hierarchy are.

Select one:

- a. Cost, Volatility, Caching
- b. Caching, I/O handling, Speed
- c. Registers, Speed, Cost
- d. Speed, Cost, Volatility

Quiz navigation

Finish attempt

Time left 0:29:47

1	2	3	4	5
8	9	10	11	12
15	16	17	18	19

Next page



12

Answered
out of 1.0
question

How many child processes are created from the following C code

```
#include <stdio.h>
int main()
{
    for(int i=0, i<10, i++){
        fork();
        printf("hello\n");
    }
}
```

$$\begin{aligned} & 2^{10} \\ & 2 - 1 \\ & 1024 - 1 \\ & \approx 1024 - 1 \\ & = 1023 \end{aligned}$$

Answer:



Question 9

Not yet answered

Marked out of 1.0

 Flag question

B

Out of the following, what is the most correct statement with reference to an Operating System?

Select one:

- a. Controls the execution of programs to prevent unauthorized access from third party
- b. Defines standards and procedures to be used for the existing hardware
- c. Attention is highly paid to resource utilization rather than performance
- d. Manages all the resources for an efficient and fair resource usage
- e. Provides a better graphical user interface for users

Quiz na

Finish attempt

Time left 0:34:2

1	2	3
8	9	1
15	16	1

Next page

Not Sure

← → × ⌂ | ① | ⌂

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Question 13

Not yet answered

Marked out of 1.0

Flag question

In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of

Select one:

a. Init process

b. Parent process

c. All processes

d. Currently running process



Next page

Quiz navigation

Finish attempt ...

Time left 0:26:11

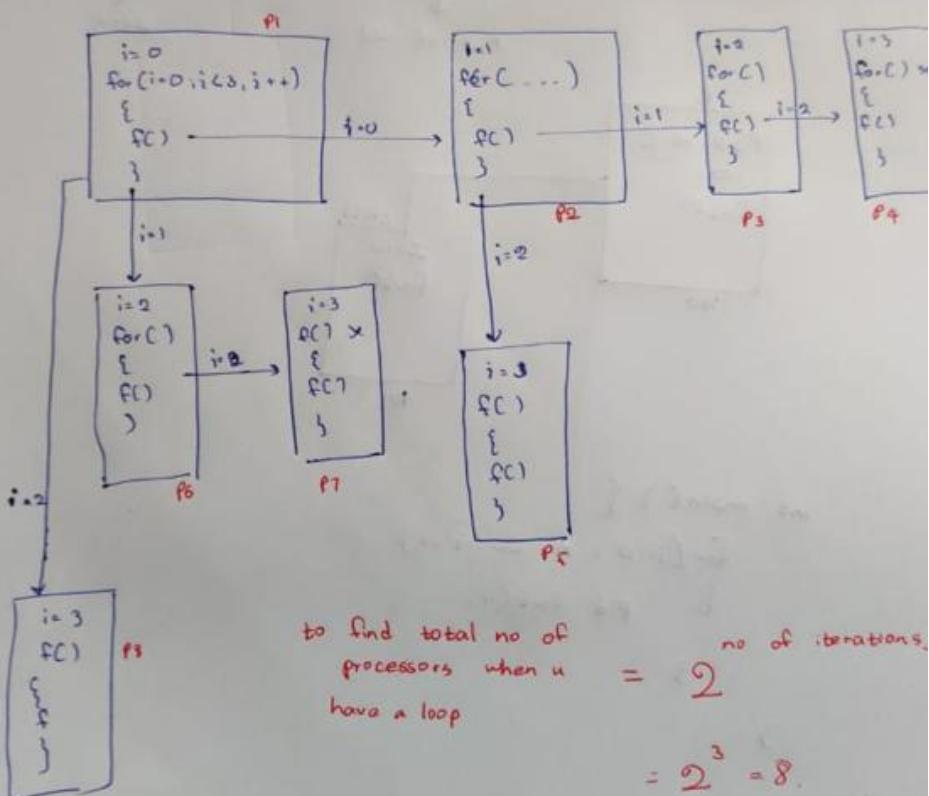
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	

```

int main() {
    for(i=0; i<3; i++)
    {
        Pid = fork();
        if(Pid == 0)
            break;
    }
}

```

3 How many child processors are created?



to find total no of
processors when u = $2^{\text{no of iterations}}$
have a loop.

$$= 2^3 = 8$$

So child processors = $2^3 - 1$

$$= 7$$

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Question 12
Not yet answered
Marked out of 1.0
Flag question

A process can be terminated due to

Select one:

- a. Normal exit
- b. Fatal error
- c. Killed by another process
- d. All of the above

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Quiz navigation

Finish attempt ...
Time left 0:27:07

1	2	3	4	5	6	
7	8	9	10	11	12	13
14	15	16	17	18	19	20

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Question 14
Not yet answered
Marked out of 1.0
Flag question

Switching the CPU to another Process requires to save state of the current process and loading the state of the new process is called, as _____.

Select one:

- a. Process Blocking
- b. Context Switch
- c. Time Sharing
- d. None of the above

Next page

Quiz navigation

Finish attempt ...
Time left 0:22:58

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	

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Question 15
Not yet answered
Marked out of 1.0
Flag question

In Unix, Which system call creates the new process?

Select one:

a. fork
 b. create
 c. new
 d. none of the mentioned

Next page

Quiz navigation
Finish attempt ...
Time left 0:21:42

1	2	3	4	5		
6	7	8	9	10	11	12
13	14	15	16	17	18	19

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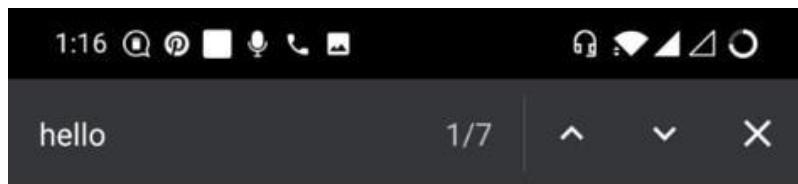
10
Answered
out of 1.0
Question

Which one of the following error will be handled by the operating system?

Select one:

a. lack of paper in printer
 b. connection failure in the network
 c. Inefficent use of resources
 d. all of the above

interrupt handle by CPU
Errors handle by OS



CSC374 Midterm Solutions

Correct answers are marked ✓ and solution remarks are included.

1. How many Hello's are printed. (Assume fork does not fail.)

```
int main() {
    int i;
    for(i = 0; i < 2; i++) {
        fork();
        printf("Hello\n");
    }
    return 0;
}
```

- 1. 2
- 2. 4
- 3. 6 ✓
- 4. 8

Solution Remarks: This code is equivalent to:

```
fork();
printf("Hello\n");
fork();
printf("Hello\n");
```

Now draw the diagram (where H is for the print statement):



2. Mark ALL the following statements either Y for correct and N if not. ASSUME all functions calls succeed unless otherwise noted.

- 1. The function execvp is called once, but doesn't return.
- 2. The function fork is called once, but returns twice.
- 3. The function longjmp is called once, but returns one or more times.
- 4. The function setjmp is called once, but doesn't return.
- 5. If the fork function fails, it returns once.

Solution Remarks:

- When longjmp is called, the call stack is replaced by the call stack in the saved environment.

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Question 18
Not yet answered
Marked out of 1.0
Flag question

Choose the correct statement

Select one:

- a. Program Code of a process is also known as the Data Section **text**
- b. Program is a process in execution
- c. Stack of a given process contains the global variables **data section**
- d. Program becomes a process when executable file is loaded into main memory

OK

Next page

Quiz navigation

Finish attempt ...

Time left 0:12:54

1	2	3	4	5	6	
7	8	9	10	11	12	13
14	15	16	17	18	19	20

Moodle

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Question 19
Not yet answered
Marked out of 1.0
Flag question

Which process can be affected by other processes executing in the system?

Select one:

- a. Init process
- b. Child process
- c. Cooperating process **Cooperating process**
- d. Parent process

Next page

Quiz navigation

Finish attempt ...

Time left 0:11:16

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	

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Question 16
Not yet answered.
Marked out of 1.0

Consider the following C program.
// Assume variables *i* and *pid*, and constant *N* have been properly defined, and/or initialized and there is no syntax error.

```
int main ()  
{  
    for(i=0, i < N, i++) {  
        pid=fork ();  
    }  
}
```

For *N*=5, How many child processes are created when the program is executed?

Select one:

a. 31
 b. 32
 c. 16
 d. 15
 e. None of the above

$2^5 = 32$

$32 - 1 = 31$

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Question 17
Not yet answered.
Marked out of 1.0

How many processes are created from the following C program

```
#include <stdio.h>  
int main()  
{  
    for(int i=0;i<10;i++){  
        int pid = fork();  
  
        if(pid == 0){  
            printf("child\n");  
            return 0;  
        }  
        else{  
            printf("parent\n");  
        }  
    }  
}
```

Answer:

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Consider the following statements and select the most appropriate answer

A) Synchronization is sharing system resources in a way that concurrent processes share a common memory space.
B) The synchronization problem arise in processes.

Select one:

a. Both statements are true
 b. Statement A is true
 c. Statement B is true
 d. Both statements are not true

Mekata uthhare danna kenek apiatath kiyapn

Finish

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Question 20
Not yet answered
Marked out of 1.0
Flag question

RPC provides a(an) ____ on the client side, a separate one for each remote procedure.

Select one:

a. stub
 b. name
 c. identifier
 d. process identifier

Finish attempt

Quiz navigation

Finish attempt...
Time left 0:10:19

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	

acer

**Question 19**

Not yet answered

Marked out of 1.0

Flag question

A process can be terminated due to

Select one:

- a. Normal exit
- b. Fatal error
- c. Killed by another process
- d. All of the above

**Question 20**

Not yet answered

Marked out of 1.0

Flag question

The address of the next instruction to be executed by the current process is provided by the

Select one:

- a. pipe
- b. CPU registers
- c. process stack
- d. program counter

Moodle

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Question 1
Not yet answered
Marked out of 1.0
Flag question

Select the correct statement(s)

Select one or more:

- a. FOR is the default when AFTER is the only keyword specified
- b. Columns in the inserted and deleted tables maps directly to a column in table which the trigger is defined
- c. For After triggers are feasible on both tables and views
- d. Format of the inserted and deleted tables are the same as the table on which the trigger is defined
- e. Inserted and deleted tables are views

Mekata uththare danna kenek apiatath kiyapn

Next page

Finish

Time 35 M

MATC 1

9

17

25

33

FEE

36

SLIIT

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Question 18
Not yet answered
Marked out of 1.0
Flag question

Consider the following C program.

// Assume variables *i* and *pid*, and constant *N* have been properly defined, and/or initialized and there is no syntax error.

```
int main ()  
{  
    for(i=0; i < N; i++) {  
        pid=fork();  
    }  
}
```

For *N*=5, How many child processes are created when the program is executed?

Select one:

- a. 31
- b. 32
- c. 16
- d. 15
- e. None of the above

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Question 3
Not yet answered
Marked out of 1.00

Consider the schema given below.

Suppliers (*sid*: integer, *sname*: string, *address*: string)

Parts (*pid*: integer, *pname*: string, *color*: string)

Catalog (*sid*: integer, *pid*: integer, *cost*: real)

How many types of parts were supplied by the supplier 102

Select one:

a. None of the above

b. Select count(*pid*)
From Catalog
Where sid = 102
Group by *pid*

c. Select count(*pid*)
From Catalog
Having sid = 102
Group by *pid*

d. Select count(*pid*)
From Catalog
Where sid = 102
Group by *sid*

e. Select count(*pid*)
From Catalog
Where sid = 102
Order by *sid*

Finish attempt...
Time left 05:28:07
35 MULTIPLE CHOICE/MATCHING QUESTIONS

1	2	3	4
8	9	10	11
15	16	17	18
22	23	24	25
29	30	31	32
FEEDBACK			
36			