

Question: 7 (Marks: 1)

\_\_\_\_\_ is also used for creating the Fifo in Unix/Linux environment.

Choices:

system()

wait()

mkfifo()

fork()

Question: 5 (Marks: 1)

In Unix/Linux environment we used the \_\_\_\_\_ for communicating between the unrelated processes.

Choices:

fifo

system

lifo

stack

In Unix/Linux environment \_\_\_\_\_ system call is used for reading from the pipe

Choices

spread()

communicate()

add()

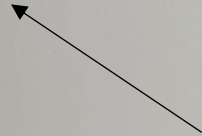
read()

An LRU page replacement may require substantial ----- assistance.



Choices:

Software



Hardware

Physical

Logical

TIME LEFT

85

In the dining philosopher problem all the five philosophers sitting around the round table having \_\_\_\_\_ chopsticks.

Choices:

6



5



4

7

TIME LEFT

86

Write down the formula along with the required parameters to calculate the overhead of bit map dealing with free space management also convert formula in C program.



Answer:



TIME LEFT

79

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In Linux \_\_\_\_\_ command is used to show the contents of all the files and directories in the current working directory.



Choices:

bf

cd

ff

ls



Operating Systems (Practical) (CS6041)

Question: 10 (Marks: 1)

In First-Come-First-Served (FCFS) scheduling algorithm waiting times of P1 and P2 are 18 and 14 seconds respectively, then average waiting time will be.



choices:

40

48

26

13.5

In Unix/Linux environment we used the \_\_\_\_\_ system call for creating the Fifo.



Choices:

`create()`

`exit()`

`wait()`

`mknod()`



Question: 25 (Marks: 5)

Write down the complete calculation steps that convert 16 bit logical address into 20-bit physical address by considering the following parameters.

Logical address (16-bit)

IP = 0B10

CS = D000

Physical address (20-bit) = ?

Answer:



To add the Linux distribution in VirtualBox/VMWare software, Linux distribution file should have \_\_\_\_\_ extension.

Choices:

docx

xls

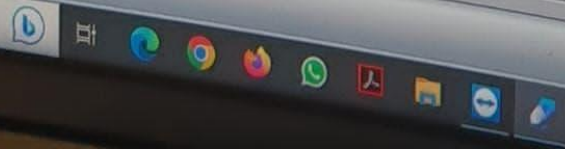
exe

iso

TIME LEFT

90

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Question: 12 (Marks: 1)

In Round Robin (RR) scheduling algorithm, we have fixed time slots for every process.

Choices:

Non-preemptive algorithm

Preemptive algorithm

Subtractive algorithm

Additive algorithm

A ----- bit (s) represents the block is allocated in the memory.



Choices:

1

0

2

4

TIME LEFT

85



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Question: 13 (Marks: 1)

Producer consumer problem is an example of process \_\_\_\_\_



Choices:

Subtraction



Addition



Multiplication



Synchronization



When fetching a page in memory only when it is needed, this mechanism is called

Choices:

Dormant Paging

Demand Paging

Page Fault

Deadlock

TIME LEFT

86

Each block is represented by \_\_\_\_\_ bit in disk free-space management.

Choices:

2 bits

1 bit

0 bit

4 bits

All record of list maintained which are not assigned to files or directories in \_\_\_\_\_



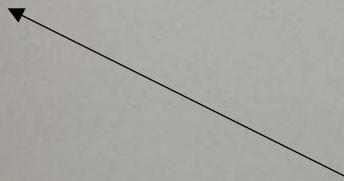
Choices:

Occupy disk block

Accessed disk block

Free-space list

Used disk block



TIME LEFT

83

An address generated by CPU is commonly referred to as the \_\_\_\_\_.



Choices:

Physical address

Hash address

Logical address



Complex address

TIME LEFT

83



Type here to search

Question: 20 (Marks: 1)

In demand paging a matrix [1024][1024] is accessed column by column, causing ----- page fault(s), where the size of page is 1024 words.

Choices:

1

1024



1024 × 1024

1024 × 2

TIME LEFT

84

Question 24 (Marks: 1)

In disk space management a bit vector is implemented by a \_\_\_\_\_

Choices

Ready list



Free space list



Waiting list



Used space list



TIME

81

Question: 26 (Marks: 5)

For Inter-process communication using pipes, between related process read() and write() system calls are used. You are required to write the syntax of read() and write() system calls.

Answer:



Question: 11 (Marks: 1)

In \_\_\_\_\_ scheduling algorithm we have fixed time slot for every process.

Choices:

Decision Tree

Round Robin

Random Forest

Naive Bayes

Question: 19 (Marks: 1)

In Banker's algorithm following data structures are used:

Choices:

Available, Min, Allocation and Find.

Available, Max, Allocation and Need.

Available, Max, Allocation and Next.

Available, Min, Allocation and First.

TIME LEFT

85

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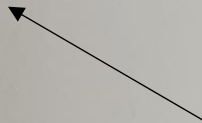


Physical address is computed by appending d (offset number) with f (frame number), size of physical address is calculated by using the formula,



Choices:

$P + d$



$d \times p$



$f + d$



$f \times d$



TIME LEFT

84



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Question: 28 (Marks: 5)

Given the following C program to implement FCFS scheduling algorithm. Given the list of Processes and their burst time, calculate the waiting time and turnaround time for each process.

```
#include <stdio.h>
int main(){
int n = 4 ;      // number of processes
int bTime[4] ;  // array for storing burst time for each process
int tATime[4] ; // array for storing turnaround time for each process
int wTime[4] ; // array for storing wait time for each process

bTime[0] = 10 ;
bTime[1] = 7 ;
bTime[2] = 7 ;
bTime[3] = 7 ;
wTime[0] = 0 ;
// loop for calculating waiting time for each process

// loop for calculating turnaround time for each process

// end of main()
}
```

Question: 29 (Marks: 5)

synchronization. A producer can produce one item while the consumer is consuming another item. The producer and consumer must be synchronized so that the producer does not try to produce an item when the buffer is full. Otherwise, it shall store the item in the buffer. You are required to complete the producer code.

```
#include<stdio.h>
int main()
{
int bufsize, in, out, produce = 0, consume = 0 , counter = 0;
in = 0; out = 0;

printf("Please enter the size of buffer. ");
scanf("%d", &bufsize);
int buffer[bufsize];
char choice ;
printf ("Enter p to produce an item in buffer.\n");
printf ("Enter q to Quit.\n");
do{
scanf("%c", &choice);
switch(choice){
case 'p':
// code for producer
break ;
}
} // end of switch
}while( choice != 'q');
}
```

Answer:



TIME LEFT

79



Type here to search



In Linux \_\_\_\_\_ command is used to show the current working directory.

Choices:

ms

bs

current

pwd

TIME LEFT

90



Type here to

Question: 10 (Marks: 1)

In First-Come-First-Served (FCFS) scheduling algorithm waiting times of P1 and P2 are 13 and 14 seconds respectively, their average waiting time will be.

Choices:

10

15

16

13.5



Question: 9 (Marks: 1)

First Come First Serve Scheduling algorithm used the \_\_\_\_\_ data structure.

Choices:

FIFO (First in First Out)

Stack

String

LIFO (Last in First Out)

Question: 8 (Marks: 1)

In the First Come First Serve Scheduling algorithm turnaround time for each process can be calculated by:

Choices:

Square root of waiting time

Squaring the average waiting time

Adding waiting time and burst time

Multiplying the waiting and average waiting time

Question: 27 (Marks: 5)

Given the following C program to implement FCFS scheduling algorithm. Given the list of Processes and their burst time, calculate the waiting time for each process and then displays it for each process. Also, calculate and display average waiting time.

```
#include <stdio.h>
int main()
{
    int n = 4 ;      // number of processes
    int bTime[4] ; // array for storing burst time for each process
    int wTime[4] ; // array for storing wait time for each process
    int tATime[4] ; // array for storing turnaround time for each process
    bTime[0] = 10 ;
    bTime[1] = 5 ;
    bTime[2] = 6 ;
    bTime[3] = 9 ;
    int avgWTime = 0 ;
    wTime[0] = 0 ;
    // loop for calculating waiting time for each process

    // calculating average waiting time

    // loop for displaying waiting time
    // displaying average waiting time

} // end of main()
```

Answer:

