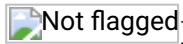


## Question 1

Complete

Mark 1 out of 1



Flag question

### Question text

In real time operating system

Select one:

- ☐ A. Process scheduling can be done only once
- ☐ B. Kernel is not required
- ☐ C. All processes have the same priority
- ☒ D. A task must be serviced by its deadline period

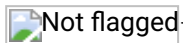
### Feedback

The correct answer is: A task must be serviced by its deadline period

## Question 2

Complete

Mark 1 out of 1



Flag question

### Question text

The priority of a real time task :

Select one:

- ☒ A. Must not degrade over time

- ☐ B. Must degrade over time
- ☐ C. May degrade over time
- ☐ D. none of the mentioned

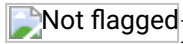
### Feedback

The correct answer is: Must not degrade over time

### Question 3

Complete

Mark 1 out of 1



Flag question

### Question text

Hard real time operating system has \_\_\_\_\_ jitter than a soft real time operating system.

Select one:

- ☒ A. less
- ☐ B. more
- ☐ C. equal
- ☐ D. none of the above

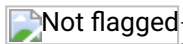
### Feedback

The correct answer is: less

### Question 4

Complete

Mark 1 out of 1



Flag question

### Question text

The method munlock() method does \_\_\_\_\_ .

Select one:

- ☐ A. Unlock complete process address.
- ☐ B. Lock complete process address.
- ☒ C. Unlock region locked using mlock
- ☐ D. None of the above

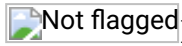
### Feedback

The correct answer is: Unlock region locked using mlock

## Question 5

Complete

Mark 1 out of 1



Flag question

### Question text

If a kernel thread performs a blocking system call, \_\_\_\_\_ .

Select one:

- ☒ A. The kernel can schedule another thread in the application for execution
- ☐ B. The kernel cannot schedule another thread in the same application for execution
- ☐ C. The kernel must schedule another thread of a different application for execution
- ☐ D. The kernel must schedule another thread of the same application on a different processor

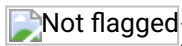
### Feedback

The correct answer is: The kernel can schedule another thread in the application for execution

## Question 6

Complete

Mark 1 out of 1



Flag question

### Question text

The main functions of RTOS is/are \_\_\_\_\_ .

Select one:

- ☐ A. Task manegment
- ☐ B. Scheduling
- ☐ C. Resource allocation
- ☐ D. Interrupt Handling
- ☒ E. All of the above

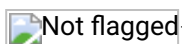
### Feedback

The correct answer is: All of the above

## Question 7

Complete

Mark 1 out of 1



Flag question

### Question text

RTAI means \_\_\_\_\_ .

Select one:

- ☐ A. Real time application index
- ☐ B. Real time application Interchange
- ☒ C. Real time application Interface
- ☐ D. Real time application Intercommunication

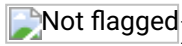
### Feedback

The correct answer is: Real time application Interface

### Question 8

Complete

Mark 1 out of 1



Flag question

### Question text

\_\_\_\_\_ IPC mechanism is used to communicate between RTAI task and linux process?

Select one:

- ☐ A. Semaphore
- ☐ B. Shared Memory
- ☒ C. FIFO
- ☐ D. MailBox

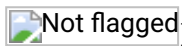
### Feedback

The correct answer is: FIFO

### Question 9

Complete

Mark 1 out of 1



Flag question

### Question text

\_\_\_\_\_ to create real time task.

Select one:

- ☐ A. rt\_create()
- ☐ B. rtf\_task\_create()
- ☒ C. rt\_task\_create()
- ☐ D. rtf\_create()

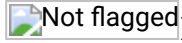
## Feedback

The correct answer is: rt\_task\_create()

## Question 10

Complete

Mark 1 out of 1



Flag question

### Question text

Which of the following Not uses O(1) scheduler ?

Select one:

- ☐ A. RTLinux
- ☐ B. RTAI
- ☐ C. Xenomai
- ☒ D. None of the above

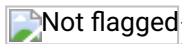
## Feedback

The correct answer is: None of the above

## Question 11

Complete

Mark 1 out of 1



Flag question

### Question text

\_\_\_\_\_ used to allocate a message pipe buffer.

Select one:

- ☒ A. rt\_pipe\_alloc()
- ☐ B. rt\_alloc\_pipe()
- ☐ C. rtf\_pipe\_alloc()
- ☐ D. rtf\_alloc\_pipe()

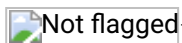
## Feedback

The correct answer is: rt\_pipe\_alloc()

## Question 12

Complete

Mark 1 out of 1



Flag question

### Question text

The Main features of an RTOS are \_\_\_\_\_ interrupt latency and a \_\_\_\_\_ thread switching latency.

Select one:

- ☐ A. Maximum, Maximum
- ☐ B. Maximum, Minimal
- ☒ C. Minimal, Minimal
- ☐ D. Minimal, Maximum

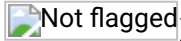
### Feedback

The correct answer is: Minimal, Minimal

### Question 13

Complete

Mark 0 out of 1



Flag question

### Question text

A process P1 has a period of 40 and a CPU burst of  $t_1 = 25$ , P2 has a period of 60 and a CPU burst of 15. The total CPU utilization is :

Select one:

- ☐ A. 0.90
- ☐ B. 0.74
- ☒ C. 0.94
- ☐ D. 0.87

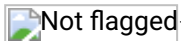
### Feedback

The correct answer is: 0.87

### Question 14

Complete

Mark 1 out of 1



Flag question

### Question text

Using EDF algorithm practically, it is impossible to achieve 100 percent utilization due to :

Select one:

- ☒ A. the cost of context switching
- ☐ B. interrupt handling

- ☐ C. power consumption
- ☐ D. all of the above

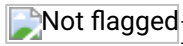
### Feedback

The correct answer is: the cost of context switching

## Question 15

Complete

Mark 0 out of 1



Flag question

### Question text

Which of the following is an independent scheduling?

Select one:

- ☐ A. LL
- ☒ B. LST
- ☐ C. EDD
- ☐ D. RMS

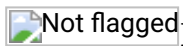
### Feedback

The correct answer is: RMS

## Question 16

Complete

Mark 1 out of 1



Flag question

### Question text

If the taskPrioritySet is called on a blocked task, its new priority \_\_\_\_\_ .

Select one:

- ☐ A. is considered while selecting the task to be unblocked
- ☒ B. is not considered while selecting the task to be unblocked
- ☐ C. is considered while selecting the task to be blocked
- ☐ D. is not considered while selecting the task to be blocked

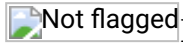
### Feedback

The correct answer is: is not considered while selecting the task to be unblocked

## Question 17

Complete

Mark 1 out of 1



Flag question

### Question text

Which is fastest semaphore in vxworks RTOS?

Select one:

- ☒ A. Binary semaphore
- ☐ B. Mutual Exclusion
- ☐ C. Counting semaphore
- ☐ D. Both B and C

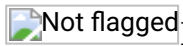
### Feedback

The correct answer is: Binary semaphore

## Question 18

Complete

Mark 1 out of 1



Flag question

### Question text

In the typical RTOS,

Select one:

- ☐ A. must be multitasking and multithreading
- ☒ B. It must not be preemptive
- ☐ C. must support dynamic memory allocation
- ☐ D. All the above

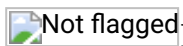
### Feedback

The correct answer is: It must not be preemptive

## Question 19

Complete

Mark 0 out of 1



Flag question

### Question text

rtai\_malloc.o does

Select one:



- ☒ A. Allocate memory with blocking from global heap
- ☐ B. Allocate memory without blocking from global heap
- ☐ C. Allocate memory with blocking from global stack
- ☐ D. Allocate memory without blocking from global stack

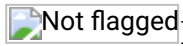
### Feedback

The correct answer is: Allocate memory without blocking from global heap

## Question 20

Complete

Mark 1 out of 1



Flag question

### Question text

In RTOS, ISRs are minimal and non-blocking

Select one:

- ☒ A. True
- ☐ B. False

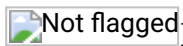
### Feedback

The correct answer is: True

## Question 21

Complete

Mark 1 out of 1



Flag question

### Question text

vTaskDelete() API function available only when INCLUDE\_vTaskDelete is set to \_\_\_\_ in FreeRTOSConfig.h

Select one:

- ☒ A. 1
- ☐ B. 0

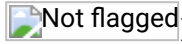
### Feedback

The correct answer is: 1

## Question 22

Complete

Mark 1 out of 1



Flag question

### Question text

Scheduling jitter means,

Select one:

- ☒ A. The variation in scheduling latency
- ☐ B. The variation in interrupt latency
- ☐ C. similar to scheduling latency
- ☐ D. None of the above

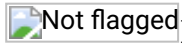
### Feedback

The correct answer is: The variation in scheduling latency

## Question 23

Complete

Mark 0 out of 1



Flag question

### Question text

The problem of priority inversion can be solved by

Select one:

- ☐ A. Priority inheritance protocol
- ☐ B. Priority inversion protocol
- ☒ C. Both priority inheritance and inversion protocol
- ☐ D. None of the mentioned

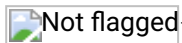
### Feedback

The correct answer is: Priority inheritance protocol

## Question 24

Complete

Mark 0 out of 1



Flag question

### Question text

What does LDF stand for?

Select one:

- ☒ A. last deadline first

- ☐ B. least deadline first
- ☐ C. list deadline first
- ☐ D. latest deadline first

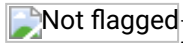
### Feedback

The correct answer is: latest deadline first

## Question 25

Complete

Mark 0 out of 1



Flag question

### Question text

Assume a task set:  $\{(1,3),(1,5),(1,6),(2,10)\}$  what is the CPU utilization time?

Select one:

- ☒ A. 0.84
- ☐ B. 0.89
- ☐ C. 0.92
- ☐ D. 0.93

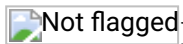
### Feedback

The correct answer is: 0.89

## Question 26

Complete

Mark 0 out of 1



Flag question

### Question text

Communication over the network done by \_\_\_\_\_ .

Select one:

- ☐ A. rtai\_netrpc.o
- ☐ B. rtai\_nrpc.o
- ☒ C. rt\_netrpc.o
- ☐ D. rt\_nrpc.o

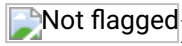
### Feedback

The correct answer is: rtai\_netrpc.o

## Question 27

Complete

Mark 1 out of 1



Flag question

### Question text

The message queue is deleted by \_\_\_\_\_ .

Select one:

- ☐ A. rtai\_queue\_delete()
- ☒ B. rt\_queue\_delete()
- ☐ C. rt\_delete\_queue()
- ☐ D. rtai\_delete\_queue()

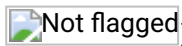
### Feedback

The correct answer is: rt\_queue\_delete()

## Question 28

Complete

Mark 1 out of 1



Flag question

### Question text

In round robin, task is stopped only when

Select one:

- ☐ A. when task terminates
- ☐ B. task request io / blocking / sleep
- ☐ C. when high priority task is ready to execute
- ☒ D. All of the above

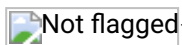
### Feedback

The correct answer is: All of the above

## Question 29

Complete

Mark 1 out of 1



Flag question

### Question text

If there are a total of  $T = 100$  shares to be divided among three processes, A, B and C. A is assigned 50 shares, B is assigned 15 shares and C is assigned 20 shares. A will have \_\_\_\_\_ percent of the total processor time.

Select one:

- ☐ A. 20
- ☐ B. 15
- ☒ C. 50
- ☐ D. none of the above

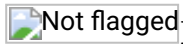
### Feedback

The correct answer is: 50

## Question 30

Complete

Mark 1 out of 1



Flag question

### Question text

Soft irq's perform \_\_\_\_\_ and can be \_\_\_\_\_ by another hard irq.

Select one:

- ☐ A. non-blocking, preempted
- ☐ B. non-blocking, not preempted
- ☐ C. blocking, not preempted
- ☒ D. blocking, preempted

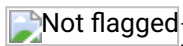
### Feedback

The correct answer is: blocking, preempted

## Question 31

Complete

Mark 1 out of 1



Flag question

### Question text

Typical RTOS handles interrupts in

Select one:

- ☒ A. Deterministic time
- ☐ B. Non Deterministic time
- ☐ C. Constant time
- ☐ D. Non of the Above

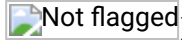
## Feedback

The correct answer is: Deterministic time

## Question 32

Complete

Mark 1 out of 1



Flag question

### Question text

Which is not a real time scheduling policy?

Select one:

- ☐ A. FIFO
- ☐ B. RR
- ☒ C. BATCH
- ☐ D. Non of the above

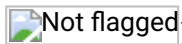
## Feedback

The correct answer is: BATCH

## Question 33

Complete

Mark 1 out of 1



Flag question

### Question text

In FreeRTOS each call to vTaskSwitchContext() checks \_\_\_\_\_ .

Select one:

- ☐ A. if any task is unblocked due to delay function
- ☒ B. if any task is blocked due to delay function
- ☐ C. if any process is blocked due to delay function
- ☐ D. in any process is unblocked due to delay function

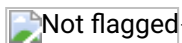
## Feedback

The correct answer is: if any task is blocked due to delay function

## Question 34

Complete

Mark 1 out of 1



Flag question

### Question text

Time duration between the generation of interrupt and start execution of its service.  
Select one:

- ☐ A. Process Latency
- ☐ B. Dispatch Latency
- ☒ C. Interrupt Latency
- ☐ D. Execution Latency

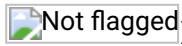
### Feedback

The correct answer is: Interrupt Latency

### Question 35

Complete

Mark 1 out of 1



Flag question

### Question text

In RTOS, device driver and task are kept in same address sapce i.e. kernel space  
Select one:

- ☒ A. True
- ☐ B. False

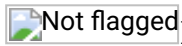
### Feedback

The correct answer is: True

### Question 36

Complete

Mark 1 out of 1



Flag question

### Question text

The \_\_\_\_\_ scheduling algorithm schedules periodic tasks using a static priority policy with preemption.  
Select one:

- ☐ A. Earliest deadline first
- ☒ B. Rate monotonic
- ☐ C. First cum first served
- ☐ D. Priority

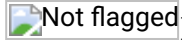
## Feedback

The correct answer is: Rate monotonic

## Question 37

Complete

Mark 0 out of 1



Flag question

### Question text

In rate monotonic scheduling algorithm, process Execution Time Period P1 {1 8} P2 {2 5} P3 {2 10} What is the CPU utilization time?

Select one:

- ☐ A. 0.77
- ☐ B. 0.72
- ☒ C. 0.84
- ☐ D. 0.92

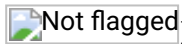
## Feedback

The correct answer is: 0.72

## Question 38

Complete

Mark 1 out of 1



Flag question

### Question text

Can the processes in the previous question be scheduled without missing the deadlines ?

Select one:

- ☒ A. Yes
- ☐ B. No
- ☐ C. Maybe
- ☐ D. None of the above

## Feedback

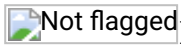
The correct answer is: Yes

## Question 39

Complete

Mark 1 out of 1





Flag question

### Question text

Earliest deadline first algorithm assigns priorities according to \_\_\_\_\_ .

Select one:

- ☐ A. Periods
- ☐ B. Burst times
- ☒ C. Deadlines
- ☐ D. None of the above

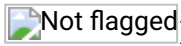
### Feedback

The correct answer is: Deadlines

## Question 40

Complete

Mark 0 out of 1



Flag question

### Question text

The most effective technique to keep dispatch latency low is to

Select one:

- ☒ A. Provide non preemptive kernels
- ☐ B. Provide preemptive kernels
- ☐ C. Make it user programmed
- ☐ D. Run less number of processes at a time

### Feedback

The correct answer is: Provide preemptive kernels

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