RTOS

1) **In real time operating system**
   a) all processes have the same priority
   b) a task must be serviced by its deadline period
   c) process scheduling can be done only once
   d) kernel is not required

2) **Hard real time operating system has _____ jitter than a soft real time** operating system.
   a) less
   b) more
   c) equal
   d) none of the mentioned

3) **For real time operating systems, interrupt latency should be _____**
   a) minimal
   b) maximum
   c) zero
   d) dependent on the scheduling

4) **In rate monotonic scheduling _____**
   a) shorter duration job has higher priority
   b) longer duration job has higher priority
   c) priority does not depend on the duration of the job
   d) none of the mentioned

5) **In which scheduling certain amount of CPU time is allocated to each process?**
   a) earliest deadline first scheduling
   b) proportional share scheduling
   c) equal share scheduling
   d) none of the mentioned

6) **The problem of priority inversion can be solved by _____**
   a) priority inheritance protocol
   b) priority inversion protocol
   c) both priority inheritance and inversion protocol
   d) none of the mentioned

7) **Time duration required for scheduling dispatcher to stop one process and start another is known as _____**
   a) process latency
   b) dispatch latency
   c) execution latency
   d) interrupt latency

8) **Time required to synchronous switch from the context of one thread to the context of another thread is called?**
   a) threads fly-back time
   b) jitter

c) context switch time
d) none of the mentioned

9) Which one of the following is a real time operating system?
a) RTLinux
b) VxWorks
c) Windows CE
d) All of the mentioned

10) VxWorks is centered around _____
a) wind microkernel
b) linux kernel
c) unix kernel
d) none of the mentioned

11) What is the disadvantage of real addressing mode?
a) there is a lot of cost involved
b) time consumption overhead
c) absence of memory protection between processes
d) restricted access to memory locations by processes

12) Pre-emptive, priority based scheduling guarantees _____
a) hard real time functionality
b) soft real time functionality
c) protection of memory
d) none of the mentioned

13) Real time systems must have _____
a) preemptive kernels
b) non preemptive kernels
c) preemptive kernels or non preemptive kernels
d) neither preemptive nor non preemptive kernels

14) What is Event latency?
a) the amount of time an event takes to occur from when the system started
b) the amount of time from the event occurrence till the system stops
c) the amount of time from event occurrence till the event crashes
d) the amount of time that elapses from when an event occurs to when it is serviced.

15) Interrupt latency refers to the period of time _____
a) from the occurrence of an event to the arrival of an interrupt
b) from the occurrence of an event to the servicing of an interrupt
c) from arrival of an interrupt to the start of the interrupt service routine
d) none of the mentioned

16) Real time systems need to _____ the interrupt latency.
a) minimize
b) maximize

c) not bother about
d) none of the mentioned

17) The amount of time required for the scheduling dispatcher to stop one process and start another is known as _____
a) event latency
b) interrupt latency
c) dispatch latency
d) context switch

18) The most effective technique to keep dispatch latency low is to _____
a) provide non preemptive kernels
b) provide preemptive kernels
c) make it user programmed
d) run less number of processes at a time

19) Priority inversion is solved by use of _____
a) priority inheritance protocol
b) two phase lock protocol
c) time protocol
d) all of the mentioned

20) In a real time system the computer results _____
a) must be produced within a specific deadline period
b) may be produced at any time
c) may be correct
d) all of the mentioned

21) In a safety critical system, incorrect operation _____
a) does not affect much
b) causes minor problems
c) causes major and serious problems
d) none of the mentioned

22) Antilock brake systems, flight management systems, pacemakers are examples of _____
a) safety critical system
b) hard real time system
c) soft real time system
d) safety critical system and hard real time system

23) In a _____ real time system, it is guaranteed that critical real time tasks will be completed within their deadlines.
a) soft
b) hard
c) critical
d) none of the mentioned

24) Some of the properties of real time systems include _____

a) single purpose
b) inexpensively mass produced
c) small size
d) all of the mentioned

25) The amount of memory in a real time system is generally _____

a) less compared to PCs
b) high compared to PCs
c) same as in PCs
d) they do not have any memory

26) What is the priority of a real time task?

a) must degrade over time
b) must not degrade over time
c) may degrade over time
d) none of the mentioned

27) Memory management units _____

a) increase the cost of the system
b) increase the power consumption of the system
c) increase the time required to complete an operation
d) all of the mentioned

28) The technique in which the CPU generates physical addresses directly is known as _____

a) relocation register method
b) real addressing
c) virtual addressing
d) none of the mentioned

29) Earliest deadline first algorithm assigns priorities according to _____

a) periods
b) deadlines
c) burst times
d) none of the mentioned

30) A process P1 has a period of 50 and a CPU burst of t1 = 25, P2 has a period of 80 and a CPU burst of 35. The total CPU utilization is _____

a) 0.90
b) 0.74
c) 0.94
d) 0.80

31) A process P1 has a period of 50 and a CPU burst of t1 = 25, P2 has a period of 80 and a CPU burst of 35., the priorities of P1 and P2 are?

a) remain the same throughout
b) keep varying from time to time
c) may or may not be change
d) none of the mentioned

32) A process P1 has a period of 50 and a CPU burst of t1 = 25, P2 has a period of 80 and a CPU burst of 35., can the two processes be scheduled using the EDF algorithm without missing their respective deadlines?

a) Yes

b) No

c) Maybe

d) None of the mentioned

33) Using EDF algorithm practically, it is impossible to achieve 100 percent utilization due to _____

a) the cost of context switching

b) interrupt handling

c) power consumption

d) all of the mentioned

34) T shares of time are allocated among all processes out of N shares in _____ scheduling algorithm.

a) rate monotonic

b) proportional share

c) earliest deadline first

d) none of the mentioned

35) 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.

a) 20

b) 15

c) 50

d) none of the mentioned

36) 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.

B will have _____ percent of the total processor time.

a) 20

b) 15

c) 50

d) none of the mentioned

37) 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.

C will have _____ percent of the total processor time.

a) 20

b) 15

c) 50

d) none of the mentioned

38) 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.
If a new process D requested 30 shares, the admission controller would _____
a) allocate 30 shares to it
b) deny entry to D in the system
c) all of the mentioned
d) none of the mentioned

39) To schedule the processes, they are considered _____
a) infinitely long
b) periodic
c) heavy weight
d) light weight

40) If the period of a process is 'p', then what is the rate of the task?
a) p2
b) 2*p
c) 1/p
d) p

41) The scheduler admits a process using _____
a) two phase locking protocol
b) admission control algorithm
c) busy wait polling
d) none of the mentioned

42) The _____ scheduling algorithm schedules periodic tasks using a static priority policy with preemption.
a) earliest deadline first
b) rate monotonic
c) first cum first served
d) priority

43) Rate monotonic scheduling assumes that the _____
a) processing time of a periodic process is same for each CPU burst
b) processing time of a periodic process is different for each CPU burst
c) periods of all processes is the same
d) none of the mentioned

44) In rate monotonic scheduling, a process with a shorter period is assigned _____
a) a higher priority
b) a lower priority
c) higher & lower priority
d) none of the mentioned

45) There are two processes P1 and P2, whose periods are 50 and 100 respectively. P1 is assigned higher priority than P2. The processing times are t1 = 20 for P1 and t2 = 35 for P2. Is it possible to schedule these tasks so that each meets its deadline using Rate monotonic scheduling?

a) yes

b) no

c) maybe

d) none of the mentioned

46) If a set of processes cannot be scheduled by rate monotonic scheduling algorithm, then _____

a) they can be scheduled by EDF algorithm

b) they cannot be scheduled by EDF algorithm

c) they cannot be scheduled by any other algorithm

d) none of the mentioned

47) A process P1 has a period of 50 and a CPU burst of t1 = 25, P2 has a period of 80 and a CPU burst of 35. The total CPU utilization is?

a) 0.90

b) 0.74

c) 0.94

d) 0.80

48) A process P1 has a period of 50 and a CPU burst of t1 = 25, P2 has a period of 80 and a CPU burst of 35. Can the processes be scheduled without missing the deadlines?

a) Yes

b) No

c) Maybe

d) None of the mentioned

49) _____ OS pays more attention on the meeting of the time limits.

a) Distributed

b) Network

c) Real time

d) Online

50) Real time systems are _____.

a) Primarily used on mainframe computers

b) Used for monitoring events as they occur

c) Used for program development

d) Used for real time interactive users

51) In _____ OS, the response time is very critical.

a. Multitasking

b. Batch

c. Online

d. Real-time

52) Which scheduling policy is most suitable for a time-shared operating system

a) Shortest-job First.
b) Elevator.
c) Round-Robin.
d) First-Come-First-Serve.

53) The basic types of OS are .....

a) batch and time sharing
b) sequential and real time
c) direct and interactive
d) batch and interactive

54) In real time operating system

a) all processes have the same priority
b) a task must be serviced by its deadline period
c) process scheduling can be done only once
d) kernel is not required

55) In rate monotonic scheduling

a) shorter duration job has higher priority
b) longer duration job has higher priority
c) priority does not depend on the duration of the job
d) none of the mentioned

56) In which scheduling certain amount of CPU time is allocated to each process?

a) earliest deadline first scheduling
b) proportional share scheduling
c) equal share scheduling
d) none of the mentioned

57) Identify which of these are real-time applications scenarios:

a) An on-line bus ticketing system
b) Printing of annual report of a company's annual report
c) Reconciling a day's transactions in an account book of a small company
d) An aircrafts' yaw control system

58) Identify the category of the following real-time systems as "hard, soft or firm"

a) An on-line celebrity cricket bat auction
b) **A patient monitoring system in an ICU**
c) A library book reservation system
d) A bank's credit card defaulters notice generation program

59) Which of the following describes the RTOS design philiosophy best

a) Maximize the throughput of the system
b) Maximize the processor utilization
c) Minimizing the response time
d) Response within certain stipulated time period

60) Scheduling of tasks is a very important consideration in RTOS. Which of the following best described the scheduling policy design:

a) The scheduler must follow a pre-emptive policy
b) The scheduler must not use pre-emptive policy option
c) The scheduler must not only use pre-emptive policy options with the priority considerations.
d) The scheduler must not use pre-emptive policy option, but must employ priority consideration.

61) Keeping a task's schedulability in mind, which way a task may be scheduled: Operating Systems/Real-time OS and Micro controllers Multiple Choice Questions

a) The task has a predetermined time after which it may be scheduled.
b) The task has a predetermined time before which it may be scheduled
c) The task has a predetermined time interval during which it must be scheduled any time.
d) The task start has a worst case delay estimate before which it must be scheduled.

62) Describe which of these scheduling policies is most suited for controlling a set of periodic tasks.

a) FCFS
b) Least laxity first
c) Earliest dead line first
d) Rate monotonic policy schedule

63) Which of the following strategy is employed for overcoming the priority inversion problem?

a) Abandon the notion of priorities altogether
b) Have only two priority levels
c) Allow for temporarily raising the priority of lower level priority process
d) Use pre-emptive policies strictly based on priorities

64) Is it true that, in general, in an embedded system the application tasks have higher priority than system tasks?

a) Yes
b) No

65) Where are the device drivers located in RTOSs with a microkernel:

a) In the kernel space
b) In the user space
c) In separately allocated space which is neither kernel space nor user space.

66) RM Schedulable upper bound for a system with 4 tasks is

a) 0.66
b) 0.95
c) 0.44
d) 0.76

67) IRIS Stand for :

a) **Increased Reward with Increased Service**
b) Iney Reward with Increased Service
c) Increased Raw with Increased Service
d) None of these

68) Earliest deadline first (EDF) is a dynamic priority scheduling algorithm used in real-time operating systems to place processes in a priority queue.

a) True
b) False

69) Consider the following inequalities with respect to a Real-Time system with N tasks and total utilization u

1. $u < N(21/N – 1)$
2. $u<1$
which among the following is TRUE for a RM schedulable task set.

a) Both 1 and 2 are necessary
b) 1 is necessary and 2 is sufficient
c) 2 is necessary and 1 is sufficient
d) Both 1 and 2 are sufficient

70) Consideration of storage, input and output devices are considered as requirement of

a) hardware requirement
b) communication requirement
c) software requirement
d) process requirement

71) Use of robot by the car manufacturing companies is an example of

a) machine controlled computers
b) network controlled computers
c) applicant controlled computers
d) user controlled computers

72) Designing of system take into considerations of

a) hardware
b) communication system
c) operating system
d) all of above

73) Slack time

a) is the amount of time left after a job if the job was started now.
b) is the amount of time left before a job if the job was started now.
c) is the amount of time left from a job if the job was started now.
d) is the amount of time left required by a job if the job was started now.

74) The priority of a real time task :

a) must degrade over time
b) must not degrade over time
c) may degrade over time
d) none of the mentioned

75) Delay and Jitter :

a) mean the same thing
b) are two completely different things
c) all of the mentioned
d) none of the mentioned

76) if jobs have unpredictable release times, a task is termed :

a) aperiodic
b) sporadic
c) periodic.
d) None of these

77) A hard real-time system is one in which ...

a) Failure to meet a single deadline may lead to complete and catastrophic system failure.
b) Missing more than a few may lead to complete and catastrophic system failure.
c) Performance is degraded but not destroyed by failure to meet response-time constraints.
d) None of the above

78) Which of the following is/are synchronous aperiodic event ...?

a) Garbage collection
b) Externally generated exception
c) Cyclic code
d) Branch instruction

79) Which of the following is/are asynchronous periodic event ...?

a) Typical branch instruction
b) Regular, but not fixed-period interrupt
c) Clock-generated interrupt
d) Traps

80) Which of the following pair of CPU utilization % and Zone type is/are correct ...

a) 83–99, questionable
b) 70–82, dangerous
c) 26–50, very safe
d) None of the above

81) Disciplines that impact on real-time systems engineering is/are...

a) Control Theory
b) Operations Research
c) Both a and c
d) None of the above

82) Which of following regarding RTOS is correct/ not misconception...

a) The study of real-time systems is mostly about scheduling theory.
b) There are no universal, widely accepted methodologies for real-time systems specification and design.
c) Rate-monotonic analysis has solved “the real-time problem.
d) None of the above

83) A system is said to be time-overloaded if...

a) U ≥ 100%
b) U ≤100%
c) U < 100%
d) U> 100%

84) Which of the following statement is true?

a) Any occurrence that causes the program counter to change non-sequentially is considered a change of flow-of-control
b) The release time is the time at which an instance of a scheduled task is ready to run, and is generally associated with an interrupt
c) Both a and c
d) None of the above

85) Which of the following represent a possible change in flow-of-control?

a) Invocation of procedures in C
b) Instantiation of an object
c) If-then, goto, and case statements
d) All of the above

86) The (CPU) utilization or time-loading factor, U, is a ...

a) Measure of the percentage of idle processing
b) Measure of the percentage of non-idle processing
c) Both a and b
d) None of the above

87) Which of the following is example of RTOS?

a) Inertial measurement system for an aircraft
b) System used to control a set of traffic lights at a four-way traffic intersection
c) System that controls all aspects of the bottling of jars of pasta sauce
d) All of the above

88) Many real-time systems utilize time-stamping and global clocks for...

a) Synchronization
b) Task initiation
c) Data marking
d) All of the above

89) Real-time systems are often ...

a) Reactive systems
b) Embedded systems
c) Data marking
d) a and b

90) Which of the following is/are system wide bus?

a) Power
b) Address
c) Data
d) All of the above

91) In signalling between devices is it is important to have a mechanism for "recording" the appearance of that signal for later processing. This process is called ...

a) Latching
b) Tristate logic
c) Triggering
d) None of the above

92) FireWire technology was originally developed by...

a) Microsoft
b) Apple
c) Google
d) None of the above

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

a) the cost of context switching
b) interrupt handling
c) power consumption
d) all of the mentioned

94) There are generally …… kinds of instructions.

a) 5
b) 4
c) 7
d) 6

95) In rate monotonic scheduling, a process with a shorter period is assigned

a) a higher priority
b) a lower priority
c) higher & lower priority
d) none of the mentioned

96) A single 1394 port can be used to connect up External devices.

a) 58
b) 64
c) 62
d) 63

97) The CISC is based on which of the following principle.

a) Complexity handled by the compiler and software
b) Instructions executed directly by hardware
c) There are multiple instructions and addressing modes
d) Highly pipelined design

98) Which of the following require special data-movement instructions

a) Memory-Mapped Input/Output
b) Programmed Input/Output
c) Direct Memory Access
d) None of the above

99) Upon receipt of the interrupt signal, the contents of the program counter are saved to a designated memory location called the…

a) Status register
b) Interrupt-handler location
c) Interrupt return location
d) None of the above

100) The interrupt vector contains the…

a) Bit map of all pending interrupts
b) Value of the lowest interrupt that will currently be honored
c) Identity of the highest-priority interrupt request
d) None of the above

101) Intel 82093AA I/O Advanced Programmable Interrupt Controller supports …… programmable interrupts

a) 24
b) 32
c) 16
d) None of the above

102) Interrupt register contains...

a) Identity of the highest-priority interrupt request
b) Bit map of all pending (latched) interrupts
c) Value of the lowest interrupt that will currently be honored
d) None of the above

103) Every real-time system has a set of timing constraints, timing constraints can be broken down into _____ categories.

a) 1
b) 2
c) 3
d) 4

104) Watchdog timers are used to ensure that...

a) CPU continues to function
b) Task initiation
c) Certain devices are serviced at regular intervals
d) Both a and c

105) **The entry of all the PCBs of the current processes is in**

a) Process Register
b) Program Counter
c) Process Table
d) Process Unit

106) **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?**

a) tQ = 15ms
b) tQ = 40ms
c) tQ = 45ms
d) tQ = 50ms

107) **Consider the following set of processes, the length of the CPU burst time given in milliseconds:**

Process	Burst time
P1	6
P2	8
P3	7
P4	3

Assuming the above process being scheduled with the SJF scheduling algorithm:

a) The waiting time for process P1 is 3ms
b) The waiting time for process P1 is 0ms
c) The waiting time for process P1 is 16ms
d) The waiting time for process P1 is 9ms

108) **The method munlock() method does _____ .**

a) Unlock complete process address.
b) Lock complete process address.
c) Unlock region locked using mlock
d) None of the above

109) **In FreeRTOS each call to vTaskSwitchContext() checks _____ .**

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

110) **In proportional share algorithm,**

CPU time = 100 shares (T = 100)

P1 = 50 shares

P2 = 15 shares

P3 = 20 shares

What is the cpu utilzation ?

a) 0.079

b) 0.85

c) 0.085

d) 0.79

111) **RTOS makes use of Cortex-M3**

a) SysTick

b) PendSV

c) SVC interrupts

d) All of the above

112) **Rate Monotonic Algorithm upper bound for a system with 4 tasks is:**

a) 0.66

b) 0.95

c) 0.44

d) 0.76

113) **What is the disadvantage of real addressing mode?**

a) there is a lot of cost involved

b) time consumption overhead

c) absence of memory protection between processes

d) restricted access to memory locations by processes

114) **which type of semaphore intializes by rt_sem_init()**

a) Resources

b) Binary

c) Counting

d) None of these

115) **Which RTOS scheduling algorithm cannot use CPU upto 100% ?**

a) Propostional share

b) Earliest deadline frist

c) Rate Monotonic Scheduling

d) None of the above

116) **When high priority task is indirectly preempted by medium priority task effectively inverting the relative priority of the two tasks, the scenario is called**

a) Priority Inversion

b) Priority Removal

c) Priority Exchange

d) Priority Modification

117) A process P1 has a period of 50 and a CPU burst of t1 = 25, P2 has a period of 80 and a CPU burst of 35. The total CPU utilization is :

a) 0.90
b) 0.74
c) 0.94
d) 0.80

118) If the taskPrioritySet is called on a blocked task, its new priority _____ .

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

119) Scheduling jitter means,

a) The variation in scheduling latency
b) The variation in interrupt latency
c) similar to scheduling latency
d) None of the above

120) What parameter is of less significance with reference to RTOS?

a) Interrupt latency
b) Interrupt recovery time
c) Interrupt response time
d) Throughtput

121) The scheduler admits a process using :

a) two phase locking protocol
b) admission control algorithm
c) busy wait polling
d) none of the above

122) Which of the following describes the RTOS design philosophy best Select one:

a) Maximize the throughput of the system
b) Maximize the processor utilization
c) Minimizing the response time
d) Response within certain stipulated time period

123) 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.

a) 20
b) 15
c) 50
d) None of these

124) **There are two processes P1 and P2, whose periods are 50 and 100 respectively. P1 is assigned higher priority than P2. The processing times are t1 = 20 for P1 and t2 = 35 for P2. Is it possible to schedule these tasks so that each meets its deadline using Rate monotonic scheduling?**

a) yes
b) no
c) maybe
d) none of the mentioned

125) **RTAI API is used to execute semaphore only if calling process is not blocked:**

a) rtf_sem_post()
b) rtf_sem_wait()
c) rtf_sem_trywait()
d) rtf_sem_timed_wait()

126) **If the period of a process is p , then the rate of the task is :**

a) p/2
b) 2*p
c) 1/p
d) P

127) **Under multiprogramming, turnaround time for short jobs is usually _____ and that for long jobs is slightly _____A. Lengthened; Shortened**

a) Lengthened; Shortened
b) Shortened; Lengthened
c) Shortened; Shortened
d) Shortened; Unchanged

128) **_____ to used to allocate a message pipe buffer.**

a) rtf_pipe_alloc()
b) rt_alloc_pipe()
c) rt_pipe_alloc()
d) rtf_alloc_pipe()

129) **Which of the following is an independent scheduling?**

a) LL
b) LST
c) EDD
d) RMS

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

a) 0.84
b) 0.89
c) 0.92
d) 0.93

U= 1/3+1/5+1/6+2/10=0.899

131) A _____ of a task is the time at which the release of a task will produce the largest response time.

a) soft instance
b) hard instance
c) critical instance
d) None of the above

132) Reentrant function is one that

a) should be executed by only one task at a time otherwise data corruption occurs
b) will allow 2 tasks to use it but not more than 2
c) will allow any number of task to execute it without data corruption
d) None of the above

133) Which of the following is not work of the Real time executive?

a) Task Management
b) IPC
c) Memory Management And File IO
d) Scheduling

134) In Rate monotonic analysis the schedulability of a task can be calculated by

a) $\sum (Ei/Ti) < U(n) = n(2^{1/n} - 1)$
b) $\sum (Ei/Ti) \leq U(n) = n(2^{1/n} - 1)$
c) $\sum (Ei/Ti) \leq U(n) = n(2^{n} - 1)$
d) $\sum (Ei/Ti) \leq U(n) = n(2^{n})$

135) What is the priority of a real time task?

a) must degrade over time
b) must not degrade over time
c) may degrade over time
d) none of the mentioned

136) What is Event latency?

a) the amount of time an event takes to occur from when the system started
b) the amount of time from the event occurrence till the system stops
c) the amount of time from event occurrence till the event crashes
d) the amount of time that elapses from when an event occurs to when it is serviced.

137) The Cortex-M3 port includes which of the following standard FreeRTOS features

a) Pre-emptive or co-operative operation
b) Very flexible task priority
c) Queues
d) Mutex
e) All of the above

138) **In a round robin scheduler the execution window is set for 2 time slots and three tasks T1, T2 & T3 were defined with 3,4,2 time slots of execution respectively. Which task will complete first and what is the overall execution time to finish one cycle of all tasks**

a) T1, 10
b) T3, 9
c) T2, 10
d) T3, 10

139) **Preemptive priority based scheduling guarantees:**

a) Hard real time functionality
b) Soft real time functionality
c) Protection of memory
d) None of the above

140) **Rate monotonic scheduling assumes that the :**

a) processing time a periodic process is different for each CPU burst.
b) processing time a periodic process is same for each CPU burst.
c) periods of all processes is the same D. none of the mentioned
d) none of these

141) **Complex scheduling algorithms :**

a) Are very appropriate for very large computers
b) Use minimal resources
c) Use many resources
d) All of the above

142) **Which one of the following is a real time operating system?**

a) RTLinux
b) VxWorks
c) Windows CE
d) All of the mentioned

143) **If a set of processes cannot be scheduled by rate monotonic scheduling algorithm, then ____**

a) They can be scheduled by EDF algorithm
b) They cannot be scheduled by EDF algorithm
c) They cannot be scheduled by any other algorithm
d) None of the above