

132/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. For Intel Core i3 processor, GMCH is integrated with :
(A) South Bridge (B) GPU
(C) North Bridge (D) FCH
2. In order to perform a critical task in timeliness, a multimedia system may use which of the following disk scheduling?
(A) SSTF (B) SATF
(C) Elevator (D) Real Time
3. An omega switching network with n CPU and n memories requires how many switches?
(A) $(n \log_2 n)/2$ (B) $n/2(n \log_2 n)$
(C) $\log_2 n$ (D) $\log_2 n/2$
4. The minimum pit length for a single layer DVD is :
(A) 500 (B) 400
(C) 600 (D) 250
5. A pipelining system with n segments takes 50 sub operations in a sequence. The time taken to complete a sub operation in each segment is 8 nsec. If the task is completed in 424 nsec, what is the value of n ?
(A) 2 (B) 8
(C) 4 (D) 16
6. In multiprocessor system, a processor generated signal that serves to prevent other processors from using the system bus as long as the signal is active can be called as :
(A) Semaphore (B) Pipe
(C) Hardware Lock (D) Critical Session
7. At the beginning of an instruction cycle, the content of the Instruction Register is 5 and that of Program Counter is 320. When the instruction is read, the address part of the instruction is the number 7. Then the effective address in relative address mode is :
(A) 328 (B) 327
(C) 325 (D) 342

8. The return address from a subroutine call is arranged as :
- (A) Round Robin (B) FIFO
(C) LIFO (D) Queue
9. The Bootstrap Loader resides in :
- (A) Hard Disk (B) Any bootable device
(C) RAM (D) ROM
10. The IRQ commonly assigned to Hard Disk Controller is :
- (A) 11 (B) 12
(C) 13 (D) 14
11. For DDR2 type RAM with 8 internal blocks and clock speed 533 MHz, the maximum average periodic refresh rate can be :
- (A) 4.5 (B) 7.8
(C) 33.3 (D) 17.5
12. An operating system written as a set of procedures in which, each can call any other without any reservation is :
- (A) Virtual System (B) Layered System
(C) Distributed System (D) Monolithic System
13. A program in execution state is called as :
- (A) Shell (B) Process
(C) Task (D) Thread
14. A situation in which a multiprogramming system spends more time in page I/O :
- (A) Starvation (B) Dead Lock
(C) Fragmentation (D) Thrashing
15. Calculate the average access time for the sector of a disk with 512 bytes per sector and 10 ms of average seek time. The disk rotates at a speed of 7200 rpm and transfers data at a rate 4 MB/Sec. The controller overhead is 1 ms. Assume that there is no service time :
- (A) 19.6 ms (B) 16.2 ms
(C) 15.3 ms (D) 10.3 ms
16. When a process wants to print a file, it writes the file name in a directory called :
- (A) Spooler (B) Buffer
(C) Daemon (D) Log