



MAS-003-004301

Seat No. _____

B. Sc. (I. T.) (Sem. III) (CBCS) Examination

October / November – 2016

CS-13 : Operating System

Faculty Code : 003

Subject Code : 004301

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

SECTION - I

1 Answer the following questions with appropriate answers : 20

- (1) Give the full form of following :
(a) MS-DOS (b) DMA
- (2) SCSI stands for _____.
- (3) Give the definition of sector sparing.
- (4) The problem of external fragmentation arises in _____
partition allocation.
- (5) MTBF is abbreviation of _____.
- (6) What is page?
- (7) Give definition of turnaround time.
- (8) In segmentation _____ register specifies the length of
the segment.
- (9) Give the definition of file attributes.
- (10) Give the full form of MBR, PCI.
- (11) What is port?
- (12) "Virtual memory is larger than physical memory." :
the sentence is true or false.
- (13) Give the definition of seek time.
- (14) Give name of method for Handling Deadlock.
- (15) Give the definition of context switch.

- (16) If all resources have _____ instance, we can detect deadlock from resource allocation graph.
- (17) Give the name of components of OS.
- (18) Use of Data-In & Data-Out register in Device controller.
- (19) _____ is also known as Elevator algorithm.
- (20) _____ is also called relocation register.

SECTION - II

- 2** (a) Attempt any **three** questions : **6**
- (1) Write a short note on kernel.
 - (2) What is mutual exclusion?
 - (3) What is swapping?
 - (4) Explain race condition.
 - (5) Explain the goal of I/O software.
 - (6) Give the definition of software Explain its types.
- (b) Attempt any three questions : **9**
- (1) Explain PCB.
 - (2) Give the type of OS & explain any two of them.
 - (3) Discuss the file type.
 - (4) Explain the deadlock characteristics.
 - (5) Explain the virtual memory.
 - (6) Write a short note on resource allocation graph.
- (c) Attempt any two question : **10**
- (1) Explain any two process scheduling algorithms.
 - (2) Explain the segmentation in detail.
 - (3) Explain the system calls.
 - (4) Explain device controller.
 - (5) Explain disk scheduling algorithm.

- 3** (a) Attempt any **three** questions : **6**
- (1) Give the difference between logical address space and physical address space.
 - (2) Give the difference between paging and segmentation.
 - (3) Explain process affinity.
 - (4) What is hard error and soft error?
 - (5) Explain process state.
 - (6) What is deadlock?
- (b) Attempt any **three** questions : **9**
- (1) What is file attribute? Explain it.
 - (2) Explain real time scheduling.
 - (3) Explain the swap space management.
 - (4) Explain the semaphore.
 - (5) Explain file system in Linux.
 - (6) Explain disk scheduling.
- (c) Attempt any two questions : **10**
- (1) Explain the classical problem in process synchronization.
 - (2) Explain page replacement algorithms.
 - (3) Write a short note on directory structure.
 - (4) Explain deadlock avoidance techniques.
 - (5) Explain contiguous memory allocation.
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