B. Sc. (IT) (Sem. III) (CBCS) Examination

October/November – 2017

CS-13 : Operating System

(Old Course)

Faculty Code : 003

Subject Code : 004301

Time : $2\frac{1}{2}$ Hours]   [Total Marks : 70

1   Attempt the following :   **20**
   (1)   What is a Thread ?
   (2)   What are semaphores ?
   (3)   The primary job for the operating system is _____.
   (4)   Process state is a part of _____.
   (5)   What is File management ?
   (6)   What is disk scheduling ?
   (7)   An operating system that runs on multiple computers but appears to be a single is _____.
   (8)   FIFO scheduling is which type of scheduling concept.
   (9)   Full form of BIOS is _____.
   (10) What is deadlock ?
   (11) What is Memory Segmentation ?
   (12) List all the states of process.
   (13) What is thrashing ?
   (14) Explain any one advantage of paging.
   (15) Explain any one advantage of segmentation.
   (16) Explain any one disadvantage of demand paging.
   (17) What is real time operating system ?
   (18) Full form of FIFO is _____.
   (19) Full form of MMU is _____.
   (20) What is Embedded System ?

2 (A) Attempt any **Three** :   6
      (1) What is Operating System ?
      (2) What is System Calls ?
      (3) What is swapping ?
      (4) What is DMA ?
      (5) Explain Stable storage implementation.
      (6) Explain Preemptive Scheduling.

   (B) Attempt any **Three** :   9
      (1) What are Process states ? Explain in detail.
      (2) Explain characteristics of Dead Lock.
      (3) Explain Disk Reliability.
      (4) Explain Principles of I/O Software.
      (5) Explain Dead Lock Prevention.
      (6) Explain File and Directory Structure.
   (C) Attempt any **Two** :   10
      (1) Explain types of Operating System.
      (2) Explain functions of Operating System.
      (3) Explain Scheduling Algorithms.
      (4) Explain Page Replacement.
      (5) Explain System Structure in detail.

3 (A) Attempt any **Three** :   6
      (1) Explain Dead Lock avoidance.
      (2) Explain File attributes.
      (3) Explain I/O Devices.
      (4) Explain Classical problem of Synchronization.
      (5) Explain Multiple Possessors Scheduling.
      (6) Explain. Dead Lock Recovery.
   (B) Attempt any **Three** :   9
      (1) Explain Process Scheduling.
      (2) Explain Critical section problem.
      (3) Explain File Operations.
      (4) Give Difference between Physical Address Space and
           Logical Address Space.
      (5) Write a note on virtual memory.
      (6) Write a note on Swap space management.
   (C) Attempt any **Two** :   10
      (1) Explain File Systems in Linux.
      (2) Explain Paging in detail.
      (3) Explain Segmentation.
      (4) Explain Demand Paging.
      (5) Explain Operating System components.