S.Y.BCA Examination
October-- 2016
Operating System – 204
Subject Code - 8434

Time: 3 Hours   **Total Marks: 100**

Q.1 Answer the following Questions
(A) List out types of operating system and explain any two of them in detail.   (10)
(B) What is operating system? Explain Layered system approach in detail.   (10)

OR

Q.1 Answer the following Questions
(A) Explain Real time and Time sharing operating system in brief.   (10)
(C) Explain monolithic and virtual machine structure in brief.   (10)

Q.2 Answer the following Questions
(A) Explain FIFO and Round-Robin scheduling algorithm with example.   (10)
(B) Explain methods for handling deadlock in brief.   (10)

OR

Q.2 Answer the following Questions
(A) What is interrupt? Explain interrupt mechanism in detail.   (10)
(B) Explain the terms: safe & unsafe state, dispatcher, process, and Thread.   (10)

Q.3 Answer the following Questions:
(A) Explain concept of paging in detail with example.   (10)
(B) Explain any two page replacement algorithm with example.   (10)

OR

Q.3 Answer the following Questions:
(A) Consider the following page reference string and calculate total no.of page   (10)
faults using FIFO and LRU page replacement algorithm. Assume four
frames.
Page Ref. String: 3, 0, 3, 2, 7, 5, 0, 4, 3, 2, 3, 5, 2, 4, 3, 0, 4, 6, 0, 4, 3, 2, 0, 5
(B) Explain contiguous and non-contiguous allocation method in detail.   (10)

Q.4 Answer the following Questions
(A) Explain sequential and direct file access method in detail.   (10)
(B) What is file? Explain Characteristics of file and File operations in brief.   (10)

OR

Q.4 Answer the following Questions
(A) List out available directory structures and explain any two of them.   (10)
(B) Explain contiguous and linked disk allocation method with example.   (10)

Q.5 Answer the following Questions
(A) Define the terms: Buffering, Caching, spooling, pooling, and interrupt.   (10)
(B) Explain Kernel I/O Subsystem in detail.   (10)

OR

Q.5 Answer the following Questions
(A) Explain any two disk scheduling algorithm with suitable example.   (10)
(B) Explain typical PC bus structure in detail.   (10)