Unit-IV

8. (a) What do you mean by a File? Explain the various operations that can be performed over a file? Also describe the various types of files. 7½

(b) Give the diagramatic representation of single level directory. Also list out the disadvantages of single level directory structure. 7½

9. Explain the following. 15

(i) Physical Address Vs Logical Address

(ii) Thrashing

(iii) Dispatcher

A (Printed Pages 4)

Roll. No. _____

SFS-4709

B.C.A. (Semester-IV) Examination, 2015

(New Syllabus)

Operating System

(BCA-S-207)

Time Allowed : Three Hours]   [Maximum Marks : 100

Note : Answer five questions in all. Question No. 1 is compulsory. Attempt one question from each unit. $4 \times 10 = 40$

1. (a) What is the difference between ready queue and Device queue?

(b) How PCBs are Connected? Discuss the process with the help of diagram.

(c) Discuss Context Switching?

(d) How do Processes Communicate? Explain direct communication and Indirect communication.

(e) Discuss buffering? Also explain zero capacity, bounded capacity and unbounded queue buffering.

(f) Discuss synchronization in detail.

(g) Define the term-kernal, thread and process.

(h) What do you mean by safe state? Explain with suitable example.

(i) What is the difference between short term Schedular and long term schedular? Also discuss I/O bound process and C.P.U. bound process.

(j) Differentiate preemptive scheduling from Non-preemptive scheduling.

Unit-I

2. Define operating system with its various types. List out various services provided by operating system.   15

3. (a) Explain swapping process in detail.   7½

(b) What is the differences between Paging and Demand Paging? How do we achieve frames and Pages in Paging Process. 7½

Unit-II

4. (a) Draw the process state diagram and describe the various process states   7½

(b) What is a Process Control Box? Explain all its components.   7½

5. (a) Discuss the various Scheduling criteria for CPU-Scheduling.   7½

(b) Discuss Round-Robin Scheduling with suitable Example.   7½

Unit-III

6. What do you mean by deadlock? Discuss the necessary conditions for deadlock to occur.15

7. Write short notes on: 15

(i) Virtual memory

(ii) Semaphores