53 (CS 303) OPSY

2014

OPERATING SYSTEM

Paper : CS 303

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer ***question number 1*** *and* ***any five*** *from the rest.*

1. Briefly answer the following questions : 10×2=20

   (i) Mention the objective and functions of operating system.

   (ii) What is deadlock ? What are the main conditions of deadlock ?

   (iii) Differentiate process from program with an example.

   (iv) What are the criteria used for CPU scheduling ?

(v) What do you mean by multiprogramming ?

(vi) What is a file ? What are the various file access methods and list some operations on file ?

(vii) What is internal fragmentation ?

(viii) What is starvation ?

(ix) What is Storage Area Network ?

(x) What is the need for Disk Scheduling ?

2. (a) Explain in detail structure of Windows and Linux Operating System. 8

(b) Explain states of process and discuss the process state transition diagram with a neat diagram. 8

3. (a) Discuss segmentation in detail with an example. 8

(b) Explain FIFO and LRU page replacement algorithm with an example. 8

4. Explain about contiguous memory allocations with neat diagram. 16

5. Explain briefly *any four* CPU scheduling algorithms with examples. 16

6. Explain *any three* Disk Scheduling Algorithms with example. 16

7. Explain Banker's Deadlock Avoidance algorithm with an illustration. 16

8. Write short notes on the following : 8+8=16

   (i) Process Control Block

   (ii) Resource Allocation Graph.
