Roll No. | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ECE)/(ETE) (2011 Onwards) (Sem.–6)

OPERATING SYSTEMS

Subject Code : BTCS-401

Paper ID : [A2314]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

a) Explain the term PCB.

b) What are the functions of Kernel?

c) Differentiate between Preemptive and Non-preemptive scheduling.

d) Define the term deadlock with an example.

e) Discuss the need of virtual memory.

f) Differentiate between Local and Global Page Replacement.

g) Define the term Disk Bandwidth.

h) Write two advantages of LINUX Operating System.

i) Differentiate between Protection and Security.

j) Differentiate between Distributed Operating Systems and Network Operating Systems.

SECTION-B

2. Explain in detail the layered structure of an operating System.

3. Explain in detail the following CPU scheduling algorithms :

   a) Priority Scheduling

   b) Round Robin

4. Write a brief note on LINUX Operating System.

5. Explain the role of I/O traffic controller in detail.

6. Write a brief note on Logical File System.

SECTION -C

7. Explain the concept of Distributed Operating Systems in detail.

8. Explain the File System Architecture and Layered Architecture in details.

9. What is the need of Page replacement? Consider the following reference string :

   7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1

   Find the number of Page Faults with FIFO, Optimal Page replacement and LRU with three free frames which are empty initially. Which algorithm gives the minimum number of page faults?