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

Total No. of Questions: 09 **Total No. of Pages: 02**

B. Tech. (CSE/IT) (Sem. 4)
OPERATING SYSTEMS
Subject Code: BTCS-401
Paper ID: A1183

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS 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 have to attempt any FOUR questions.**
3. **Section C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION A

1.

a) Define the term kernel. What are its functions?

b) Explain the term Waiting time and Turnaround time in terms of CPU scheduling algorithms.

c) Explain the term convoy effect.

d) Write any two advantages of Virtual Memory.

e) Explain the term Belady's anomaly in terms of page replacement algorithms.

f) Define the term Disk Bandwidth.

g) What is meant by seek time and rotational latency in case of disk drive?

h) Explain various goals of Protection.

i) Define the term Distributed Operating Systems.

j) Write any two advantages of LINUX operating systems.

SECTION B

2. Write a note on the various services provided by the operating systems.

3. Explain in detail about the following CPU scheduling algorithms
(a) Shortest Job First
(b) Multilevel feedback Queue scheduling

4. Explain with an example the concept of shared pages in detail.

5. Write a brief note on Windows based operating Systems.

6 Write a brief note on Physical File Systems.

SECTION C

7. (a) Write a detailed note on Device management policies.
(b) Explain the role of I/O traffic controller in detail

8. (a) Explain the concept of semaphores in detail.
(b) Explain in detail the concept of Multiprocessor Operating Systems.

9. Explain any two Page Replacement algorithms with a suitable example?