Roll No. ☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Electrical & Electronics Engineering)   (Sem.–7)
OPERATING SYSTEMS
Subject Code : BTEEE-805E
M.Code : 71973

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

Q1. Answer briefly :

a) What is semaphore?

b) List some properties of logical address space.

c) What do you understand by FAT? Explain.

d) What is critical section and why is it so called?

e) What is CPU scheduling and why is it important?

f) Why do processes communicate?

g) What is a bootstrap loader?

h) What is the function of dispatcher?

i) What is the purpose of system program?

j) Differentiate user level threads from kernel level threads.

SECTION-B

Q2. Explain the LRU page replacement algorithms. Why is it difficult to implement it in pure form?

Q3. How can timer be used as a CPU protection mechanism? Explain.

Q4. Consider a system that supports the strategies of contiguous, linked, and indexed allocation. What criteria should be used in deciding which strategy is best utilized for a particular file?

Q5. Explain why it is less costly to enforce controlled access in segmented memory management than in pure paging.

Q6. Differentiate between multitasking and multiprogramming systems.

SECTION-C

Q7. Explain the Banker's algorithm for detection and avoidance of deadlock with the help of suitable example.

Q8. What do you mean by virtual memory? Why is it needed? Discuss the hardware support required by the operating system to implement the virtual memory concept.

Q9. Compare various disk scheduling algorithms by taking suitable example.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.