Seat
No.

B.E. (Electronics Engineering) (Part - IV) (Semester - VIII) (Revised) (Old) Examination, November - 2017
OPERATING SYSTEM
Sub. Code: 49435

Day and Date :Thursday, 02 - 11 - 2017   **Total Marks : 100**
Time :10.00 a.m. to 1.00 p.m.

Instructions :
1) All questions are compulsory.
2) Digits to the right indicate full marks.
3) Assume suitable data if required and mention it clearly.

SECTION-I

Q1) Attempt any three from the following-

a)   Explain the term Linker.   [6]

b)   Explain in brief the priority scheduling algorithm.   [6]

c)   Describe the process of spooling? What are its benefits?   [6]

d)   Describe the concept of multitasking.   [6]

e)   Explain usage and implementation of semaphores.   [6]

Q2) Attempt any two from the following-

a)   Describe the operating system services provided to the user and to the system itself.   [8]

b)   Draw a diagram showing CPU switch from process to process and explain the concept of context switch.   [8]

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c) Draw and explain queueing diagram representation of process scheduling. Explain long term scheduler. [8]

d) Explain safe state for deadlock avoidance. [8]

Q3) Attempt any two from the following-

a) Illustrate the Round Robin (RR) CPU scheduling algorithm. [8]

b) Differentiate between Process and threads. [8]

c) What is deadlock? What are the necessary conditions for a deadlock situation in a system? [8]

d) Explain Dinning-Philosophers classic synchronization problem. [8]

SECTION-II

Q4) Attempt any two from the following.

a) Explain principle of operation of static partitioned memory allocation. [8]

b) Explain how space is allocated in swapping. How does swapping takes place in memory management. [8]

c) Explain the steps involved in DMA transfer (I/O). [8]

d) Explain SCAN disk scheduling algorithm. [8]

Q5) Attempt any two from the following-

a) Explain paging scheme with required hardware support. [8]

b) Discuss the Optimal page replacement algorithm with an example. [8]

c) Explain the functions of the device independent I/O software. [8]

d) Comment on directory information of a typical file system organization.[8]

Q6) Write short notes on (any three)

a) Basic method of segmentation. [6]

b) Overlays [6]

c) RAID [6]

d) File protection [6]

e) I/O device flexibility and direct use of interrupts; characteristics of embedded Os. [6]

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