

Code No: **R42045****R10****Set No. 1****IV B.Tech II Semester Supplementary Examinations, July/August - 2017****OPERATING SYSTEMS****(Electronics and communication Engineering)****Time: 3 hours****Max. Marks: 75****Answer any FIVE Questions****All Questions carry equal marks**

- 1 a) Explain with the flow diagram about the instruction execution using an example? [7]
b) Define the essential properties of the following types of operating system: (a) Batch (b) Time sharing (c) Interactive (d) Real time (e) Distributed. [8]
- 2 Explain about the following:
(i) Threads
(ii) process states and control
(iii) Multi threading. [15]
- 3 a) What is a semaphore? Write the solution for mutual extension using semaphores. [7]
b) Explain about Monitor. Discuss about readers/writers problem? [8]
- 4 a) Explain briefly about a deadlock detection algorithm using an example? [7]
b) Explain the following: (i) conditions for a resource deadlock (ii) handling deadlocks [8]
- 5 a) Explain various techniques used to load the program into main memory. [7]
b) Write a short notes on the following: (i) Relocation (ii) Linking (iii) Demand paging with virtual memory [8]
- 6 a) Using an example, explain about all types of preemptive scheduling? [7]
b) Explain various disk scheduling policies for 77, 98, 123, 58, 12, 67, 3 200. Assume disk arm at 89 position. [8]
- 7 a) What is meant by allocation? Explain about indexed allocation? [7]
b) With a neat sketch explain about the acyclic graph directories? [8]
- 8 Write short notes on the following: (i) trusted systems (ii) viruses and related threats. [15]