

R09**Code: 9A05505**

B.Tech III Year I Semester (R09) Supplementary Examinations December 2015

OPERATING SYSTEMS

(Common to IT, ECC and CSE)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the system call sequence.
(b) Write about the following special purpose systems:
(i) Real-time embedded systems.
(ii) Handheld systems.
- 2 (a) What is the objective of multiprogramming? Explain how it is achieved.
(b) Give a note on CPU scheduling in Linux.
- 3 What is a semaphore? Give the solution to the dining-philosophers problem using semaphores and explain.
- 4 (a) Why are segmentation and paging, sometimes combined into one scheme?
(b) Discuss situations under which the most frequently used page replacement algorithm generates fewer page faults than the least recently used page replacement algorithm. Also discuss under what circumstances the opposite holds.
- 5 Describe Banker's algorithm to avoid a deadlock. What are the problems in its implementation?
- 6 (a) What is file structure? How file structure is supported by different operating systems?
(b) What are the different types of file access methods?
- 7 (a) Give a brief note on the I/O performance.
(b) Explain about host-attached storage. What are its limitations?
- 8 What is Authentication? How it is different from authorization? What are the methods for authentication?
