

R09**Code: 9A05602**

B.Tech III Year II Semester (R09) Supplementary Examinations December/January 2015/2016

UNIX INTERNALS

(Computer Science and Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the two methods of altering file access permissions of a file.
(b) What are the main functions of kernel? Explain each of them in detail.
- 2 Write short notes on:
 - (a) System response time.
 - (b) System throughput.
 - (c) Caching scheme.
- 3 Write in detail about the following:
 - (a) File descriptor.
 - (b) UNIX file structure.
- 4 Suppose a process attempts to *umount* a file system and another process is simultaneously attempting to *creat* a new file on that file system. Only one system call can succeed. Explore the race condition.
- 5 (a) Differentiate between register context and system level context.
(b) What sequence should be followed while handling the interrupts?
- 6 (a) Draw and explain the process state diagram for checking and handling the signals.
(b) Write an algorithm for Fork. Explain it in detail.
- 7 (a) Give brief description about the various data structures used in demand paging.
(b) Write and explain an algorithm for Swapper.
- 8 (a) Design an algorithm for Closing a Device. Explain it in detail.
(b) Explain in detail about the block device switch and character device switch tables.
