

Reg. No. :

Question Paper Code : 71353

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

Sixth/Seventh Semester

Computer Science and Engineering

CS 2028/CS 605/10144 CSE 22/CS 1005 — UNIX INTERNALS

(Common to Information Technology)

(Regulation 2008/2010)

(Common to PTCS 2028 - Unix Internals for B.E. (Part-Time) Fifth Semester
Computer Science and Engineering - Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is kernel?
2. Define buffercache.
3. What is meant by sleep on an event?
4. What is the use of inode?
5. Why do the kernel generate virtual address for process?
6. What is the use of pregon table?
7. What are special files?
8. What is meant by priority of process?
9. What are schedulers?
10. What are major and minor numbers?



PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the architecture of UNIX. (8)
(ii) Explain kernel data structures in detail. (8)

Or

- (b) (i) Discuss about advantages and disadvantages of buffercache. (6)
(ii) Explain about bread algorithm in detail. (10)
12. (a) (i) Discuss about incore inode. (8)
(ii) Explain about namei algorithm. (8)

Or

- (b) (i) Discuss about super block. (8)
(ii) Explain about disk block allocation algorithm. (8)
13. (a) (i) Explain open and read system call in detail. (8)
(ii) Write short notes on pipes. (8)

Or

- (b) (i) Discuss about DUP systemcall. (8)
(ii) Explain about linking and unlinking file system in detail. (8)
14. (a) (i) Explain about process context in detail. (8)
(ii) Discuss about growreg algorithm. (8)

Or

- (b) (i) Discuss about boot and init process. (8)
(ii) Discuss about process scheduling. (8)
15. (a) Explain about demand paging in detail. (16)

Or

- (b) Explain about device drivers. (16)