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**Question Paper Code : 60353**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Sixth/Seventh Semester

Computer Science and Engineering

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

(Common to Information Technology)

(Regulations 2008/2010)

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

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the operating system services.
2. What are the strength of UNIX operating system?
3. What is a buffer cache?
4. List some file permissions in UNIX.
5. What is the use of the chmod command?
6. What is the use of the unlink system call?
7. What is a shell?
8. What is a process?
9. What is meant by swapping?
10. State the data structures required for demand paging?

PART B — (5 × 16 = 80 marks)

11. (a) Draw and explain the architecture of UNIX OS. (16)

Or

- (b) Discuss the various functions involved in UNIX System administration. (16)

12. (a) What is an Inode? Explain the algorithm for the conversion of a path name to an Inode number. (16)

Or

(b) Explain about allocation of disk blocks in detail. (16)

13. (a) (i) Explain the algorithm for reading a file.  
(ii) Explain the pipe system call with an algorithm. (8+8)

Or

(b) Explain about special files creation in detail. (16)

14. (a) Discuss about :  
(i) States  
(ii) Transitions. (8+8)

Or

(b) Discuss about :  
(i) Sleep process control  
(ii) Signals. (8+8)

15. (a) Explain about the algorithms for opening and closing a device. (16)

Or

(b) Discuss about memory management policies in detail. (16)