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Roll No.

IT-601

B. E. (Sixth Semester) EXAMINATION, June, 2012

(Information Technology Engg. Branch)

UNIX AND SHELL PROGRAMMING

(IT-601)

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt *one* question from each Unit. All questions carry equal marks.

Unit-I

1. (a) Explain the architecture of unix system. 10
(b) In the algorithm getblk if the kernel remove a buffer from free list, it must raise the processor priority lever to block out interrupts before checking the free list, why ? 10

Or

2. (a) Differentiate between the following : 10
 - (i) Execution of process in user mode and kernel mode
 - (ii) Interrupts and exception
- (b) Describe advantages and disadvantages of buffer cache. 10

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Unit-II

3. (a) Discuss the structure of a regular file. How byte offset can be converted in a block number ? 10
- (b) Write algorithm for returning an inode that corresponds to a given path name. 10

Or

4. (a) What is supper block ? Discuss the fields associated with supper block. 10
- (b) Describe the mounting and unmounting of a system. 10

Unit-III

5. (a) What do you mean by state of a process ? Explain process states transition diagram. 10
- (b) What are the components of the context of a process ? What are the steps of a context switch ? 10

Or

6. Describe sleep and wake up algorithm for a process. 20

Unit-IV

7. (a) What are the basic functions of shell ? Explain the different types of shell used in unix system. 10
- (b) What is grep command ? What are the options used in it ? Explain with example. 10

Or

8. (a) Explain shell variables. What are the rules for building shell variable ? 10
- (b) Discuss various metacharacters of shell. 10

Unit – V

9. (a) Explain the use of BEGIN and END section in awk programming. 10
(b) What are the awk built-in variables ? Explain. 10

Or

10. (a) Describe the concept of file handling in perl. 10
(b) Write a short note on socket programming. 10