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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Third Semester, B.E. - Information Science and Engineering

Semester End Examination; Dec. - 2014

Shell and Advanced C Programming

Time: 3 hrs *Max. Marks: 100*

Note: *i) Answer **FIVE** full questions, selecting **ONE** full question from each Unit.*
ii) Assume suitable missing data if any.

Unit - I

1. a. Explain Dynamic memory allocation functions. Differentiate between them. 8

   b. Write a program to swap two numbers by passing the address of two numbers to a function swap ( ). 6

   c. What is Pointer? Write a program to demonstrate pointer to a pointer. 6

2 a. With an example demonstrate the use of structure with in a structure (Complex structure). 8

   b. Explain the following functions :
   (i) Strcpy (ii) Strcat (iii) Strlen (iv) Strrev 8

   c. Differentiate between structure and union. 4

Unit - II

3 a. Explain the features of UNIX O.S. 8

   b. Explain the different types of files in UNIX. 6

   c. Explain the following commands:
   (i) echo (ii) bc (iii) Script 6

4. a. Explain the absolute and relative path name in UNIX file system. 7

   b. Explain the following command:
   (i) cmp (ii) com (iii) Diff 7

   c. Explain the following command:
   (i) rm (ii) mv (iii) cp 6

Unit - III

5 a. Explain ls-*l* command. And also explain seven attributes of files. 8

   b. Explain shell interpretive life cycle. 6

   c. Explain two special files pipes, tee. 6

6 a. Explain file permission and how to change file permission in Unix. 8

   b. Explain escaping and quoting with example. 6

   c. Explain the different modes of vi editor. 6

Contd…2

Unit - IV

7	a.	Explain PS command with all possible options.	6
	b.	Explain the mechanism of process creation.	7
	c.	Explain the following commands: (i) at (ii) batch (iii) cron	7
8	a.	Explain hard links and symbolic links with an example.	6
	b.	Explain find command with all options available in Unix.	8
	c.	Explain the following: (i) Umask (ii) inode	6

Unit - V

9	a.	Explain grep command and also egrep.	10
	b.	Explain Line addressing and context addressing	10
10	a.	Write a shell script to find out the number of files in a root directory.	6
	b.	Write a shell script to find out current date and month of the year and files modified yesterday.	8
	c.	Explain expr and evaluate expressions.	6

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