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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belgaum)
Fifth Semester, B.E. - Information Science and Engineering
Semester End Examination; Dec. - 2015
UNIX System and Network Programming

Time: 3 hrs *Max. Marks: 100*

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

1 a.	What are the major differences between ANSIC and K & RC? Explain with examples.	8
b.	List and explain any six constants defined by POSIX.1 in <limit.h> header.	12
2 a.	List and explain UNIX and POSIX file attributes.	8
b.	Explain the role of inodes in UNIX system V.	4
c.	Write a difference between hard link and symbolic link.	8

UNIT - II

3 a.	Write a short note on *fcntl* API.	6
b.	Explain any five general file API with an example.	10
c.	Explain *mknod* and *mkfifo* file API.	4
4 a.	Explain how process is terminated in UNIX environment in an example.	6
b.	Explain the memory layout of C program.	6
c.	Write a short note on setrlimit and getrlimit.	8

UNIT - III

5 a.	Write a short note on fork function. Write a C program to fork a process and print process identifier.	10
b.	Explain exec function with an example.	10
6. a.	Explain the procedure of network login.	10
b.	Explain how job control is done in UNIX.	10

UNIT - IV

7 a.	Explain how UNIX Kernel supports for signals?	8
b.	Write short note on kill signal.	6
c.	Explain POSIX1.b timers.	6
8 a.	Explain the coding rules in UNIX.	10
b.	Explain syslog facility provided in (BSD**.**UNIX).	6
c.	Explain how client server model is implemented in UNIX.	4

UNIT - V

9 a. Explain how inter process communication is achieved using PIPES with respect to client server model.　　10

　b. Explain how synchronization to access resource is achieved by semaphores.　　10

10 a. Explain all Socket API necessary for creating connection between client and server.　　12

　b. Write the different between blocking and non blocking I/O.　　4

　c. Write short notes on socket address.　　4

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