



SE-7365

B. E. IV (Sem. VII) Examination

April / May – 2011

Computer Engineering

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दर्शायेव निशानीवाणी विगतो उत्तरवही पर अवश्य लिखनी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. 4 (Sem - 7)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Computer Engineering"/>	<input type="text"/>
Subject Code No. : <input type="text" value="7"/> <input type="text" value="3"/> <input type="text" value="6"/> <input type="text" value="5"/>	<input type="text" value="Student's Signature"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	

- 1 (a) Attempt following :
- (1) Explain UNIX architecture with diagram. 3
 - (2) Compare system calls and library functions. 3
 - (3) What is primitive system data in UNIX. Enlist four primitive data types. 2
 - (4) Explain / seek function. 2
- (b) (1) Explain atomic operations. 5
- (2) Explain fcnt/function of UNIX. 5
- 2 (a) Write a C program which fills the stat structure and prints all the members of the stat structure. 7

OR

- (a) Write a C program to simulate/s-g command of UNIX. 7
 - (b) Explain umask function. Write a C program which demonstrates the use of umask function. 8
- 3 Attempt any **three** :
- (1) Explain use of sticky bit in UNIX operating system. 5
 - (2) Explain strftime function with example. 5
 - (3) Explain group and shadow files in UNIX. 5
 - (4) Explain file systems of UNIX. 5

- 4 (a) Attempt any **ten** : 10
- (1) State true or false :
Exit function performs certain cleanup processing before returning to the kernel.
 - (2) State usage of function : `calloc ()`.
 - (3) Justify : `fork()` function is called once but it returns twice.
 - (4) When a process is terminated normally or abnormally, parent process is notified by the kernel by sending _____ signal to the parent process.
 - (5) _____ and _____ are the signals which can never be ignored.
 - (6) What is the need of signal handler function ?
 - (7) State true or false :
If we ignore `SIGALRM` signal. Its default action is to terminate the process.
 - (8) In _____ mode input processing, terminal input is processed as lines.
 - (9) _____ are sometimes called named pipes.
 - (10) Define : Semaphore.
 - (11) Define : Zombie process.
 - (12) What is "Copy On Write [COW]" ?
- (b) Explain different ways of process termination in detail. 10
- 5 (a) Explain environment variable in detail. 8
- OR**
- (a) Explain in brief, file sharing between parent and child process after `fork ()`. 8
- (b) Explain reliable signal terminology and its semantics. 7
- OR**
- (b) Explain different actions associated with signal in detail. 7
- 6 Attempt any **three** : 15
- (1) Explain `bind ()` function and `accept ()` function in detail.
 - (2) Explain non-canonical mode of input processing in detail.
 - (3) Explain message queues and shared memory and its use.
 - (4) Explain race condition in detail. Also discuss how it can be avoided.