

**BACHELOR OF COMPUTER  
APPLICATIONS  
(PRE-REVISED)**

**Term-End Examination**

**June, 2014**

**CS-63 : INTRODUCTION TO SYSTEM  
SOFTWARE**

*Time : 2 hours*

*Maximum Marks : 60*

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*Note : Question No. 1 is compulsory. Attempt any three questions from the rest.*

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1. (a) Write an algorithm and draw the corresponding flow chart to find the sum of even numbers and odd numbers separately for the integers ranging from 1 to 100. 8
- (b) What is a semaphore ? How is it used to solve mutual exclusion problem ? Explain this with the help of an example. 7
- (c) Write UNIX commands for the following :
- (i) Remove a directory XYZ which consists of some 5 files. 5x1=5
  - (ii) To change the permission of a file such that only owner gets full permissions (r,w, x) and all others will get only read permission.
  - (iii) To display the total no. of lines in a file.
  - (iv) To schedule a job in background.
  - (v) To display the total no. of processes executing.

- (d) Write regular expressions for the following 'C' statements : 5  
(i) if... else statement  
(ii) for statement
- (e) What are the functions of Loader ? Differentiate between Dynamic Loading and Absolute Loading. 5
2. (a) Write a shell program to accept three integers, find the largest among them. 5  
(b) What is Semantic Analysis ? Explain with an example. 5
3. (a) Explain the concept of Virtual memory. Give at least three advantages of it. 5  
(b) What is X-Windows ? Mention the features which differentiates it from other operating systems. 5
4. (a) Explain the address translation scheme in a paging system, with the help of a diagram. 5  
(b) What is the role of a scheduler ? List and explain the types of schedulers. 5
5. (a) Describe the security features of file and directory structures in UNIX. 5  
(b) Give suitable example to illustrate both first-fit and best-fit-strategies of disk allocation. 5
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