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CS-63

**BACHELOR OF COMPUTER
APPLICATIONS (BCA)**

Term-End Examination

December, 2019

CS-63 : INTRODUCTION TO SYSTEM SOFTWARE

Time : 2 Hours

Maximum Marks : 60

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

1. (a) What is an Assembler ? Explain the phases of a two pass assembler with the help of an example. 10
- (b) Explain multiprogramming with dynamic partitions. Also explain the process of compaction. Give suitable examples/ diagrams. 10
- (c) Describe the linked allocation method of disk allocation. 5

- (d) Write a shell script that prints the contents of a file in uppercase. 5
2. (a) Explain various types of text editors in UNIX operating system. 5
- (b) Differentiate between a subroutine and a function. Also suggest the advantages of using an array in a programming language. 5
3. (a) Explain Round Robin Scheduling Algorithm for the following set of processes (with a time slice of 5 units of time) : 5

Process	Burst Time
P1	25
P2	5
P3	5

Calculate waiting time and turnaround time for the process.

- (b) Differentiate between the layered approach and kernel approach of an operating system. 5

4. (a) Explain solution of mutual exclusion problem using semaphores. 5
- (b) Give UNIX commands for : 5×1=5
- (i) Changing permission mode.
 - (ii) To create a new directory.
 - (iii) To compare two files.
 - (iv) To split files.
 - (v) For searching a given pattern.
5. (a) Explain the features of lint (c verifier) and Source Code Control System (SCCS) in UNIX. 5
- (b) Explain SCAN scheduling algorithm for disk scheduling with the help of an example. 5