(b) What are the three editors available in almost all the versions of UNIX ? Explain with neat diagram three modes of vi editor. **10**

9. What are loops and explain three different methods of loops in brief. **16**

Subject Code—52561

B. Sc. EXAMINATION

(Main/Re-appear)

(Batch 2018 Onwards)

(Third Semester)

COMPUTER SCIENCE

CCsL-305 (Course-VI)

Operating System

Time : 3 *Hours* *Maximum Marks :* 80

Note : Attempt *Five* questions in all. Q. No. **1** is compulsory. All questions carry equal marks.

1. Attempt all questions in short :

(a) Differentiate between Multi-programming and Multi-processing systems.

(b) Distinguish between logical address space and physical address space.

(c) Explain the need of an Operating System.

(d) What are the various criteria for CPU scheduling ?

(e) What is virtual memory ? Why is it needed ?

(f) List the differences between a process and a program.

(g) What is Shell ? What are different types of shells available ?

(h) List importance of writing shell scripting. **8×2=16**

Unit I

2. Explain architecture of UNIX OS with a neat diagram. **16**

3. Explain in detail the following CPU scheduling algorithms :

(a) Shortest Job First

(b) FCFS

(c) Round Robin **16**

Unit II

4. Define and distinguish between paging and segmentation methods of memory management giving suitable examples. **16**

5. What do you mean by paging ? List out advantages and disadvantages of paging. Explain the working of page table map with a neat diagram. **16**

Unit III

6. What do you mean by a file system ? Discuss the various file access methods in detail. **16**

7. Explain the following disk space allocation methods in detail : **16**

(a) Contiguous allocation

(b) |A|

Unit IV

8. (a) What are shell variables ? What are the two types of shell variables ? Explain briefly. **6**