(b) What do you mean by a shell and what are the different types of shells ? **8**

9. Write short notes on the following with example :

(a) Pipes and filter **8**

(b) Decision making in Shell Scripts **8**

Roll No. ..... Exam Code : J-21

Subject Code—52563

B. Sc. EXAMINATION

(Main/Re-appear)

(Batch 2018 Onwards)

(Third Semester)

COMPUTER APPLICATIONS

CCaL-305 (Course-VI)

Operating System

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

Note : Attempt *Five* questions in all. Q. No. **1** is compulsory.

Compulsory Question

1. (a) What are different states of process ?

(b) What is booting process and its types ?

(c) Define Physical and Logical address space.

(d) What are advantages of Virtual Memory ?

(e) What are different attributes of a file ?

(f) How is a value stored in a Hash Table ?

(g) Suppose you execute a command using exec, what will be the status of your current process in the shell ?

(h) What is Pattern matching utility ? **8×2=16**

Unit I

2. Explain traditional Unix System structure with an appropriate diagram. **16**

3. (a) What is process ? Describe different attributes of a process. **8**

(b) Discuss various schedulers an Operating system uses for process scheduling. Describe FCFS Scheduling Algorithm. **8**

Unit II

4. Describe Fixed and Dynamic Portioning Techniques. What are various advantages and disadvantages of Dynamic Partitioning over fixed partitioning. **16**

5. What is Segmentation Technique in memory management ? Why Segmentation is required ? Discuss Translation of Logical address into physical address by segment table. What are various advantages and disadvantages of segmentation ? **16**

Unit III

6. Discuss briefly various File Access Methods to access files stored in secondary memory. **16**

7. Describe Contiguous Allocation and File Allocation Table methods used for Disk Space Allocation along with their advantages and disadvantages. **16**

Unit IV

8. (a) Explain the following with example :

(i) cut

(ii) paste

(iii) join

(iv) tr **8**