

Exam. Code : 103203

Subject Code : 1103

B.A./B.Sc. 3<sup>rd</sup> Semester**COMPUTER APPLICATION (Operating System)**

Time Allowed—3 Hours]

[Maximum Marks—75

**Note :** Attempt any FIVE questions. All questions carry equal marks.

1. (a) Explain various memory management methods in operating system. 7.5
- (b) What are the differences between single and multi-user systems ? Explain. 7.5
2. Compute the Average waiting time and Turnaround time for the following set of processes by applying FCFS, preemptive SJF algorithms :

Process	Arrival Time (ms)	CPU burst (ms)	
P <sub>1</sub>	0	10	
P <sub>2</sub>	1	29	
P <sub>3</sub>	2	3	
P <sub>4</sub>	3	7	
P <sub>5</sub>	4	12	15

3. (a) What are the features and benefits of UNIX ? Explain. 10
- (b) Explain the concept of time sharing with illustrative examples. 5
4. (a) Describe the special features and applications of the following operating systems :
- (i) Multi-programming
- (ii) Multi-tasking
- (iii) Timesharing. 10
- (b) What are the types of files in UNIX ? Explain in detail. 5
5. (a) What are the strengths and weaknesses of UNIX operating system ? Explain. 10
- (b) Write a shell script to check whether a given number is prime or not. 5
6. (a) What is a shell ? What are the different types of shell in Unix ? 10
- (b) Explain Login and Logout from a session. 5
7. (a) Explain any five file commands. 5
- (b) What are filters ? Give example. 5
- (c) What is pipelining ? Explain. 5

8. (a) Give the sentence :

It is slow in getting started but is quite powerful and the cursor is on the character of the word 'started', give the vi editor commands to :

- (i) move to the beginning of the word 'Started'
  - (ii) then to move to the end of the word 'but'
  - (iii) then to move to the beginning of the last word 'powerful'
  - (iv) then to move to the beginning of the given sentence and
  - (v) finally to the end of the given sentence. 10
- (b) What are the different ways in which a text can be inserted in Vi editor ? Explain. 5