Exam. Code : 103203
Subject Code : 1095

B.A./B.Sc. 3rd Semester
COMPUTER APPLICATION
(Operating System)

Time Allowed—3 Hours]   [Maximum Marks—75

Note :— Attempt any **five** questions.

1.   (a) What is an operating system ? How has it evolved ? Explain the concepts of compiler and interpreter.

                7.5

    (b) What is the difference between a preemptive and non-preemptive scheduling algorithms ? Explain FCFS scheduling algorithm. Find the average turnaround time and average waiting time for the processes given in the table below :

Process	CPU burst time (in ms)	
P1	24	
P2	3	
P3	3	7.5

2. Differentiate the following with examples :—

    (i) Preemptive and non-preemptive scheduling

    (ii) I/O bound and CPU bound

    (iii) Scheduler and dispatcher.   15

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3. (a) What is the concept of a file ? What is its importance and use ? What are the operations that may be performed on a file ? 7.5

   (b) What do you mean by the booting of a computer system ? Explain the steps involved. 7.5

4. (a) Differentiate between paging and segmentation in detail. 7.5

   (b) In a variable partition scheme, the operating system has to keep track of allocated and free space. Suggest a means for achieving this. Describe the effects of new allocations and termination in your suggested scheme. 7.5

5. (a) What are the features and benefits of UNIX ? Explain in detail. 10

   (b) What are the components of UNIX ? Explain. 5

6. Discuss the UNIX file system in detail. 15

7. (a) Explain various commands in the vi editor. 7.5

   (b) Explain the use of commands Get and Put in shell programming with example. 7.5

8. (a) What are the methods for providing input values to a shell script and explain. 7.5

   (b) How will you set permissions for Owner, Group and Public ? 7.5