

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2023 – 2024)

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE, NOVEMBER 2023
FIRST SEMESTER

COURSE : MAJOR CORE
PAPER : OPERATING SYSTEMS : CONCEPTS AND APPLICATIONS
SUBJECT CODE: 23CS/DC/OS14
TIME : 1 ½ HOURS **MAX. MARKS: 50**

SECTION A

Answer all the questions **(5 X 2 = 10)**

1. Define system calls.
2. What is a process?
3. Differentiate linked and indexed allocation.
4. Define paging.
5. What is malware?

SECTION B

Answer any FOUR of the following questions **(4 X 5 = 20)**

6. Recollect the salient features of Unix
7. Demonstrate the First Come First Serve (FCFS) CPU Scheduling algorithm for the following set of processes

Process	Burst Time
P1	24
P2	3
P3	3

8. Apply file direct access method in an example system and explain.
9. Make use of the swapping technique in memory management to demonstrate the efficient utilization of available memory.
10. Examine type 1 and 2 hypervisors.
11. Analyse the logical and physical memory space.

SECTION C

Answer any TWO of the following questions **(2 x 10=20)**

12. Make use of the shortest-seek-time-first (SSTF) algorithm in disk scheduling in an example and explain.
13. Explain the following i) Structure of OS ii) Process Control Block .
14. Analyze the free space management system in storage management.
