

Regular/Scholarship/Back Exam – 2082 Phagun/Chaitra

Program: Diploma in Information Technology/
Computer Engineering

Full Marks: 80

Year/Part: III/I (2022)

Pass Marks: 32

Subject: Operating System

Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Attempt any EIGHT questions.

1. Define operating system. Explain its functions. (2+8)
2. Define process, program and threads. Compare program and process. (6+4)
3. Define multithreading. Explain the various process states with diagram. (2+8)
4. Define process scheduling. Consider the following set of process with their burst time in MS, calculate the average waiting time and average turnaround time by using SRTN algorithm. (2+8)

PID	Arrival Time	Burst time
A	5	4
B	1	7
C	0	3
D	3	2

5. Define multiprogramming. Explain the first fit, worst fit and best fit scenario of memory allocation. (2+8)
6. What is deadlock? Write down conditions for deadlock to occur and deadlock prevention techniques. (2+4+4)
7. What is file? Explain about file allocation methods. (2+8)
8. Define cryptography. Differentiate between active & passive attacks. (2+8)
9. Write short notes on: (any TWO) (2×5)
 - a) Internal Vs external fragmentation
 - b) Bankers algorithm Page fault Page fault