



WALCHAND COLLEGE OF ENGINEERING

(Government Aided Autonomous Institute)
Vishnambag, Sangli - 416415

Second Year B.Tech. Computer Science and Engineering
MSE, EVEN SEMESTER, AY 2022-23
Operating Systems (6CS222)



MSE

Day & Date: Thursday, 09/03/2023

PRN: _____

Time : 3.00 pm to 4.30 pm

Max Marks: **30**

IMP: Verify that you have received question papers with correct course code, branch etc.

- Instructions**
- a) All questions are compulsory.
 - b) Writing question number on answer book is compulsory otherwise answers may not be assessed.
 - c) Assume suitable data wherever necessary.
 - d) Figures to the right of question text indicate full marks.
 - e) Mobile phones, smart gadgets and programmable calculators are strictly prohibited.
 - f) Except PRN anything else writing on question paper is not allowed.
 - g) Exchange/Sharing of stationery, calculator etc. not allowed.

Text on the right of marks indicates course outcomes (Only for faculty use)

- | | | Marks | |
|----|---|-------|-----|
| Q1 | A) Draw the four components of a computer system and brief about them. Also discuss the main goals of Operating System? | 5 | CO1 |
| | B) With schematic discuss the various services provided by Operating system. | 5 | CO1 |
| Q2 | A) Which System Programs are required for execution of user program? Mention and brief about each of them in the sequence they appear. | 5 | CO2 |
| | B) Enlist the states associated with a process. With the help of Process state diagram describe possible process transitions in steps from their creation to termination. | 5 | CO2 |
| Q3 | A) What is the purpose of Long term and Short term schedulers which are used for CPU scheduling? With diagram explain the working of Medium term scheduler. | 5 | CO3 |
| | B) An Operating system uses FCFS scheduling algorithm for following processes. Draw Gantt chart and calculate waiting time, turnaround time of each process and average waiting time using this algorithm. | 5 | CO3 |

Processes	CPU burst time (ms)
P1	24
P2	7
P3	12
P4	3

..... End of question paper