SOMAIYA
VIDYAVIHAR UNIVERSITY

Maximum Marks: 30	**Semester: July 2023 – Oct 2023** **Examination: In-Semester Examination**	**Duration :**
Programme code:	**Class: TY**	**Semester: V(SVU 2020)**
Programme:		
Name of the Constituent College: K. J. Somaiya College of Engineering	**Name of the department:** COMP/ETRX/EXTC/IT/MECH	
Course Code: 116m54C501	Name of the Course: Operating System	

Question No.		Max. Marks	CO Mapped	BT Level
Q1	Compare and contrast the characteristics of zombie processes and orphan processes in Unix-like operating systems.	10	CO1	AN
Q2	Consider the set of 4 processes whose arrival time and burst time are given below:	10	CO2	AP

Process No.	Arrival Time	Burst Time		
		CPU Burst	I/O Burst	CPU Burst
P1	0	3	2	2
P2	0	2	4	1
P3	2	1	3	2
P4	5	2	2	1

If the CPU scheduling policy is Shortest Remaining Time First, calculate the average waiting time and average turn-around time.

OR

Consider the set of 4 processes whose arrival time and burst time are given below:

Process No.	Arrival Time	Priority	Burst Time		
			CPU Burst	I/O Burst	CPU Burst
P1	0	2	1	5	3
P2	2	3	3	3	2
P3	3	1	2	3	2

If the CPU scheduling policy is Priority Scheduling, calculate the average waiting time and average turn-around time. (Lower number means higher priority)

Q3	What are the distinct roles and functions of the short-term scheduler, medium-term scheduler, and long-term scheduler in the context of process management within an operating system?	10	CO2	UN

Details for your reference