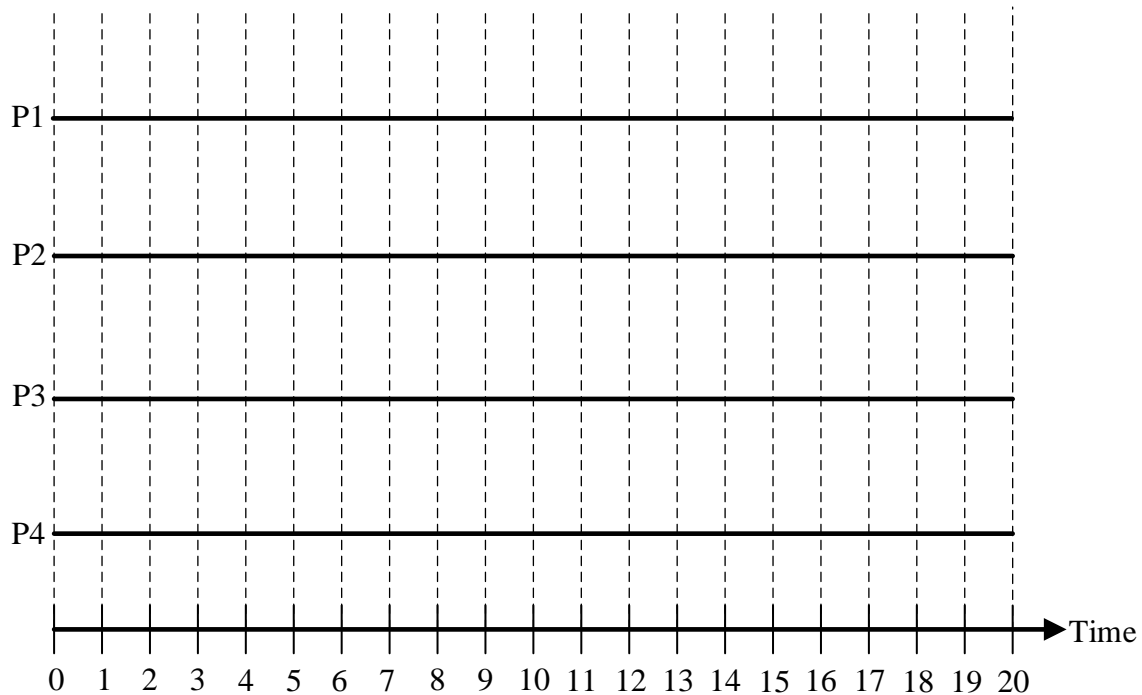


Assignment #03

1. In the single-core computer system, Shortest Remaining-time First (SRF) is one of the scheduling algorithms to determine the next process in the ready queue to be executed by the CPU. Assume that there are four processes in the ready queue, and the information of these four processes are as follows:

	Arrival time	Service time
P1	0	7
P2	2	3
P3	1	8
P4	4	2

2. Please fill out the following scheduling chart based on the above information (4p):

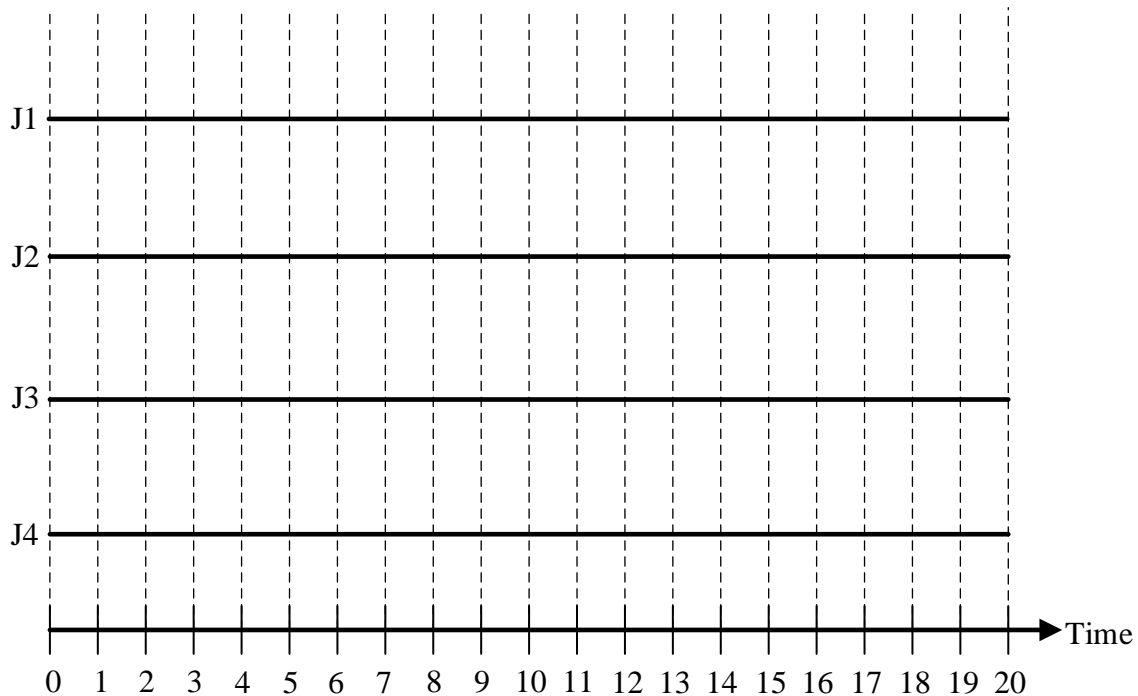


- b) Please calculate the waiting time of the for processes. (1p)

2. In the single-core real-time OS, ***Earliest Deadline First (EDF)*** is a very popular scheduling algorithm to schedule jobs/processes. Assume that there are four periodical jobs in the system, and the information of these four jobs are as follows:

	Service time (C)	Relative deadline (D)	Period (T)
J1	2	16	20
J2	1	3	4
J3	2	4	5
J4	2	8	10

a) Please fill out the following scheduling chart based on the above information (4p):



b) If the service time of J1 becomes 3, are there any jobs that miss their deadlines? If no, please calculate the overall CPU utilization; If yes, please specify which jobs and when their deadlines are missed. (1p)