Quiz #1 Spring 2021 CSE3213 – Operating System Section A SA

Q#1 (C01) **(1+3)**

What is the significance of bootstrapping for an Operating System? Explain the Microkernel Operating System architecture.

Q#2 (C02) **(6)**

Given the following data, find the average turn-around time by applying the Round-Robin process scheduling algorithm. Assume that, the time quantum q=6

Process	Arrival Time	CPU Burst time
P1	26	22
P4	0	19
P0	7	18
P2	22	16
P5	17	16
P6	11	12
P7	16	12
P3	36	16

Quiz #1 Spring 2021 CSE3213 – Operating System Section A SB

Q#1 (C01) **(1+3)**

What is the purpose of a fork () system call ? Show the steps of the execution of a system call by an Operating System.

Q#2 (C02) **(6)**

Given the following data, find the average turn-around time by applying the Round-Robin process scheduling algorithm. Assume that, the time quantum q=7

Process	Arrival Time	CPU Burst time
P1	26	22
P4	0	19
P0	7	18
P2	22	16
P5	17	16
P6	11	12
P7	16	12
P3	36	16

Quiz #1 Spring 2021 CSE3213 – Operating System Section B SA

Q#1 (C01) **(1+3)**

What is the difference between a process and a program? Explain Monolithic and monolithic modular Operating System architectures.

Q#2 (C02) **(6)**

Given the following data, find the average turn-around time by applying the Round-Robin process scheduling algorithm. Assume that, the time quantum q=3

Process	Arrival Time	CPU Burst time
P1	26	12
P4	0	9
P0	7	8
P2	22	6
P5	17	6
P6	11	12
P7	16	2
P3	32	6

Quiz #1 Spring 2021 CSE3213 – Operating System Section B SB

Q#1 (C01) **(1+3)**

Why is an OS called a kernel? Explain the type-1 and type-2 hypervisors.

Q#2 (C02) **(6)**

Given the following data, find the average turn-around time by applying the Round-Robin process scheduling algorithm. Assume that, the time quantum q=4.

Process	Arrival Time	CPU Burst time
P1	26	12
P4	0	9
P0	7	8
P2	22	6
P5	17	6
P6	11	12
P7	16	2
P3	32	6