**University of Asia Pacific**

**Department of Computer Science and Engineering**

**Mid-Semester Examination Fall-2020**

**Program: B.Sc. in CSE**

Course Title: Operating System Course No. CSE 405 Credit: 3.00 Time: 1.00 Hour. Full Mark: 60 There are **Four** Questions. **Answer three questions including Q-1 and Q-2.**

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| 1. | a. | |  |  |  | | --- | --- | --- | | Process | Burst Time | Arrival Time | | A | 5 | 6 | | B | 8 | 5 | | C | 3 | 1 | | D | 9 | 0 |   Perform First come first served and Shortest job first CPU scheduling algorithm on the given scenario and prepare the Grant chart. Also find the average waiting time. | **[10+10]** | **CO3** |
| 2. | a. | |  |  |  |  | | --- | --- | --- | --- | | Process | Burst Time | Arrival Time | Priority | | P | 10 | 0 | 3 | | Q | 6 | 2 | 2 | | R | 7 | 3 | 1 | | S | 2 | 1 | 2 |   Perform Priority scheduling algorithm and Round Robin CPU scheduling algorithm on the given scenario and prepare the Grant chart. Also find the average waiting time. | **[10+10]** | **CO3** |
| 3. | a. | What is an Operating System? What are the problems that we will face if we do not have any Operating System? | **[10]** | **CO1** |
|  | b. | Is it possible to run more than one processes in a single CPU System? Explain how. | **[10]** | **CO1** |
|  |  | **OR** | **[10]** | **CO1** |
| 4. | a. | We are running various processes in our computers all the time. Why doesn’t the main memory overload and crush? | **[10]** | **CO1** |
|  | b. | We know that in Regular Pipes, both the Read and Write descriptors are used by the same process. In this case how can we make it useful? | **[10]** | **CO1** |