

(An Autonomous Institution)

2020-2021 ODD TERM**CAE-1 EXAMINATION FOR SPLIT-II COURSES WINTER-2020 (ONLINE MODE)****Third Semester B.Tech(Artificial Intelligence)****Operating System****Time: 1 hr.]****[Max. Marks : 15**

- 1) [CO1/CO2/CO...] indicates the question related to specific course outcome.
- 2) All questions carry marks as indicated
- 3) Assume suitable data wherever necessary.
- 4) Due credit will be given to neatness and adequate dimensions.
- 5) Illustrate your answer wherever necessary with the help of neat sketches.
- 6) Use of non-programmable calculator is permitted.

C01	a	Describe the difference between symmetric and asymmetric multiprocessing systems? What are three advantages and one disadvantage of multiprocessor systems?	5																		
	b	What are the functions of an Operating System? Give example	5																		
C02	a	<p>Consider the following set of processes, with the length of CPU burst given in milliseconds</p> <table><tr><th>Process</th><th>Burst Time</th><th>Priority</th></tr><tr><td>P1</td><td>2</td><td>2</td></tr><tr><td>P2</td><td>1</td><td>1</td></tr><tr><td>P3</td><td>8</td><td>4</td></tr><tr><td>P4</td><td>4</td><td>2</td></tr><tr><td>P5</td><td>5</td><td>3</td></tr></table> <p>The processes are assumed to have arrived in the order P1,P2,P3,P4,P5 all at time 0.</p> <p>a) Draw four Gantt Charts that illustrate the execution of these processes using the following scheduling algorithms : FCFS, SJF, non preemptive priority(a larger priority implies a higher priority), and RR (quantum=2)</p>	Process	Burst Time	Priority	P1	2	2	P2	1	1	P3	8	4	P4	4	2	P5	5	3	4
Process	Burst Time	Priority																			
P1	2	2																			
P2	1	1																			
P3	8	4																			
P4	4	2																			
P5	5	3																			
	b	What is the average turnaround time of each process for each of the scheduling algorithms in Q2 a.	4																		
	c	With reference to Q2 a Which of the algorithm results in the minimum average waiting time (over all processes)?	2																		

***** Stay Home Stay Safe *****