AJEENKYA
D Y PATIL UNIVERSITY

End Term Examination (December 2019)

School: School of Engineering **Program: BTECH (CTIS & MACT)**

Course: Operating System Building Blocks **Course Code: CSC222**

Semester: III **Max Marks: 30** **Duration (mins) : 60 Min**

Note- 1. Figures to the right indicates full marks
2. Attempt any three questions.

Q1) a) Define Co-operating process. **(1)**

b) List and explain any four functions of operating system. **(4)**

c) What is process? Explain process state diagram. **(5)**

Q2) a) Define Preemptive scheduling. **(1)**

b) Solve the below mentioned example using Round Robin Algorithm when Quantum time is 2 milliseconds, draw the Gantt chart and also calculate the average waiting time. **(9)**

Process	Arrival Time	Burst Time
P1	0	4
P2	1	5
P3	2	2
P4	3	1
P5	4	6
P6	6	3

Q3) a) Define Deadlock. Explain with an appropriate diagram. **(3)**

b) Describe the four causes of deadlock occurrence. **(2)**

c) List & elaborate about the methods of recovery of a deadlock situation for resource and process. **(5)**

Q4) a) Explain Logical Address Space & Physical Address space. **(4)**

b) Define Swapping. Elaborate the process of swapping with appropriate diagram. **(5)**

c) What are the two constraints of swapping. **(1)**

Q5) a) What is access matrix ? **(2)**

b) Explain the four implementation techniques for Access Matrix. **(8)**

*******ALL THE BEST*******