

GOVERNMENT ENGINEERING COLLEGE, DAHOD
(GUJARAT TECHNOLOGICAL UNIVERSITY)
COMPUTER ENGINEERING
B. E. SEMESTER: IV
ASSIGNMENT LIST YEAR 2016

SUBJECT: Operating System (2140702)

No.	Title	Last Date of Submission
1	<ol style="list-style-type: none"> 1. Define operating system. Explain the different views of operating system. Also explain types of operating system. 2. What is PCB? Discuss its major fields. 3. Explain the classical thread model with its implementation strategies. 4. Define mutual exclusion. How mutual exclusion can be achieved? Explain. 	19-2-2016
2	<ol style="list-style-type: none"> 1. What is deadlock? List the conditions that lead to deadlock. How deadlock can be prevented? 2. Explain IPC Problem – Readers & Writers Problem. 3. For the following page reference string: 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1 Calculate the page faults applying the following Page Replacement Algorithms for a memory with three frames: (i) Optimal (ii) LRU (iii) FIFO 4. Explain the following UNIX commands (i) grep (ii) cut (iii) chmod (iv) finger 	4-3-2016
3	<ol style="list-style-type: none"> 1. Explain the following allocation algorithms: 1) First-fit 2) Best-fit 3) Worst-fit 2. Explain any two File Allocation Methods from the following: (i) Contiguous Allocation (ii) Linked Allocation (iii) Indexed Allocation 3. Explain the goals of I/O software. 4. Explain any three Disk Arm Scheduling algorithms with suitable illustrations. 	30-3-2016
4	<ol style="list-style-type: none"> 1. Write short note: RAID levels. 2. Explain UMA and NUMA multiprocessors. 3. Explain Linux kernel and its functions in brief. 4. Explain Swapping in Detail. 	6-4-2016