Seat N	o.: Enrolment No	
GUJARAT TECHNOLOGICAL UNIVERSITY ME – SEMESTER-1 (NEW) EXAMINATION – WINTER 2016		
Subject Code: 3715102 Subject Name: Advanced Operating System and Management Time: 2:30 pm to 5:00 pm Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.		
		[7 Marks]
Q. No. a. b.	·	[7 Marks] be shared [7 Marks]
Q. No. a. b.	What is meant by semaphore? Explain busy waiting semaphores with diagram. What do you mean by swapping? Does swapping increase the Operating Systems' overhead your answer. OR	[7Marks] eads? Justify [7Marks]
	Explain difference between Security and Protection? Describe the scheme of capa implement protection? What is meant by inter process communication? Explain the two fundamental morprocess communication.	[7Marks]
	Why is segmented paging important? What are the different pieces of the virtual a segmented paging? List the properties which a hashing function should possess to ensure a goodsearch what approaches are adopted to handle collision? [7Marks] OR	[7Marks]
Q. No. a. b.	What do you mean by heap? Discuss two main approaches to identify and reuse frarea in a heap. List the steps needed to perform page replacement. Explain the different page replacement list out the main requirements, which should be satisfied by a page replacement policy.	[7Marks]

a. What is an I/O buffer? What is the advantage of buffering? Is buffering always effective? Justify your

b. What are threads? Why are they required? Discuss the differentiation between Kernel level and

[7 Marks]

[7 Marks]

answer with help of an example.

user level threads in different OS?

Q. No. 5

- a. Draw the state diagram of a process from its creation to termination, including all transitions, and briefly elaborate every state and every transition.[7 Marks]
- b. How resources of acomputer system are protected? Explain user anddata oriented accesscontrol. [7 Marks]