ST.JOSEPH'S COLLEGE OF ENGINEERING

ST.JOSEPH'S INSTITUTE OF TECHNOLOGY

CS6401-OPERATING SYSTEM

Assignment – 3

Part – A

1. Define logical address and physical address.
2. What are overlays?
3. Define Paging.
4. Define Segmentation.
5. What is virtual memory?
6. What is Demand paging?
7. What is the resident set and working set of the process?(Nov/Dec 2014)
8. List the steps needed to perform page replacement ? (Nov/Dec 2014)

Part – B

1. Explain the various page replacement strategies.(Nov/Dec 2014)
2. Explain in detail about swapping and thrashing.
3. Write in detail about Virtual memory.
4. a) Consider the following segmented paging memory system. There are 4 segments for the given process and a total of 5 page tables in the entire system. Each page table has a total of 8 entries. The physical memory requires 12 bits to address it; there are a total of 128 frames.

Segment table		Page Tables						
		0		1	2	3	4	
		0	0x73	0x25	0x85	0x0f	0x17	
0	0x3	1	0x2c	0x2d	0x31	0x3d	0x00	
1	0x1	2	0x05	0x1e	0x01	0x5d	0x0d	
2	0x0	3	0x17	0x5a	0x1f	0x1e	0x66	
3	0x4	4	0x57	0x0f	0x09	0x6e	0x62	
		5	0x1a	0x7a	0x0a	0x2f	0x50	
		6	0x4b	0x2b	0x1a	0x78	0x32	
		7	0x 11	0x6c	0x32	0x7b	0x11	
Physical memory address = 12 bits								

i) How many bytes are contained within the physical memory?
(ii) How large is the virtual address?
(iii) What is the physical address that correspond to virtual address 0x312?
(iv) What is the physical address that correspond to virtual address 0x1E9?(NOV/DEC 2014)

b) What happens on a page fault?