CSE 202 Operating System

Assignment – 3

Zero marks will be awarded if the contents of two submissions are same.

Q1. Distinguish between:

(a) Static and dynamic allocation
(b) Logical and physical addresses
(c) Swapping and paging
(d) Fixed and variable partitioning
(e) Internal and external fragmentation
(f) Contiguous and non-contiguous allocation
(g) Page, frame, and segment

Q2. What are the advantages and disadvantages of contiguous allocation with fixed partitioning?

Q3. A process is to be swapped-in to the location 40100 in the memory. If the logical addresses generated by the process are 100, 245, 140, and 350, what are the corresponding physical addresses?

Q4. A process has relocatable code of size 700 K. The relocation register is loaded with 30010 K and the limit register contains the address 31000 K. If the processor generates logical addresses, 990 and 1020, where will they be in the physical memory?

Q5. Discuss the role of PTBR and PTLR in the implementation of paging.

Q6. How does the paging concept increase memory accesses?

Q7. How do you reduce two-memory accesses in paging?

Q8. How does paging eliminate external fragmentation?

Q9. What is the problem in implementing optimal page-replacement algorithm?

Q10. What is the relation between the degree of multi-programming and CPU utilization?