Question Bank

4.1 What is the motivation for main memory management?

4.2 What is the impact of fixed partitioning on fragmentation?

4.3 Give the relative advantages and disadvantages of load time dynamic linking and run-time dynamic linking. Differentiate them from static linking.

4.4 Explain the process of linking and loading?

4.5 Give arguments to support variable partitioning for main memory management.

4.6 How would you classify the buddy system of memory allocation? Write a short critique on the scheme.

4.7 What is meant by virtual memory? With the help of a block diagram explain the data structures used.

4.8 Describe first-fit and best-fit strategies for disk space allocation, with their merits and demerits.

4.9 What is a page and what is a frame. How are the two related?

4.10 What is swapping? Why does one need to swap areas of memory?

4.11 Discuss virtual memory management scheme. Compare any two page replacement policies

4.12 Explain the software and hardware methods of implementing page lookup tables.

4.13 Explain how segmented memory management works. Also explain in details address translation and relocation segmented memory management


4.15 What is thrashing? When does it happen and how does it affect performance?

4.16 What is a page fault? What action does the OS? take when a page fault occurs?

4.17 Write short notes on
   a Segmentation
   b Free space management
   c Paging

4.18 What is the purpose of a TLB? Explain the TLB lookup with the help of a block diagram, explaining the hardware required.

4.19 Discuss the following page replacement algorithms with an example.
   a Optimal
4.20 Describe the actions taken by the operating system when a page fault occurs.

4.21 Compare and contrast the paging with segmentation. In particular, describe issues related to fragmentation.

4.22 What is portability? Differentiate between codes and object code portability.

4.23 Describe the first fit, best fit and worse fit strategies for disk space allocation.

4.24 Explain the following memory management techniques:
   a. Partitioned memory allocation
   b. Segmented allocation.

4.25 Describe any two page replacement algorithms giving examples.