BASIC COMPUTER ORGANISATION

Tutorial 10 – Operating Systems

Question 1:

   An Operating System has three blocks of memory available of sizes 60 blocks, 52 blocks and 100 blocks. A new process arrives requiring 52 blocks. How will it be allocated if the partitions are selected by:
   a) First fit,
   b) Best fit,
   c) Worst fit?
   What will happen in each case if the partitions are dynamic?

Question 2:

   The following five processes arrive at approximately the same time. Their service times are given below:

P1 = 120; P2 = 60; P3 = 180; P4 = 50; P5 =300.

   a) Draw a Gantt chart showing the completion time of each process using the first-come, first-served CPU scheduling. What is the average execution time?
   b) Draw a Gantt chart showing the completion time of each process using the shortest-job-next CPU scheduling. What is the average execution time in this case?
   c) Draw a Gantt chart showing the completion time of each process using the round-robin CPU scheduling with a time slice of 60. What is the average execution time now?