Q1) The First Fit Algorithm is a memory allocation technique that assigns the first available memory block that is large enough to hold the requested block of memory. This approach has benefits of being uncomplicated and efficient, as well as being able to allocate memory quickly. However, it may result in external fragmentation, which means that smaller memory blocks may be scattered throughout the memory space, and it may not always choose the best available memory block.

In contrast, the Best Fit Algorithm selects the smallest available memory block that can hold the requested block, which helps minimize external fragmentation and efficiently use memory space. On the other hand, this technique may be slower than the First Fit Algorithm and may require more memory management operations.

Lastly, the Worst Fit Algorithm assigns the largest available memory block to the requested block, which can minimize internal fragmentation and potentially outperform the Best Fit Algorithm in speed. However, it may also create more external fragmentation than the Best Fit Algorithm and may not always select the best memory block. Ultimately, choosing the appropriate memory allocation algorithm depends on specific system requirements and finding a balance between efficiency, fragmentation, and speed.