Q1. A system has:

- Logical address space: 16,384 pages

- Page size: 1 KB

- Physical memory: 4,096 frames

calculate the sizes of the logical and physical addresses?

Q2. Which of the following best explains why a TLB is used in a paging system?

a. To increase the size of physical memory
b. To reduce the number of page faults
c. To avoid storing page tables in memory
d. To speed up virtual-to-physical address translation

Q3. If a memory access takes 100 ns, and TLB lookup takes 10 ns, what is the effective memory access time if the TLB hit rate is 90%?

a. 110 ns
b. 120 ns
c. 111 ns
d. 190 ns

Q4. (Diagram Question)

Draw a diagram showing how a **logical address** is translated into a **physical address** ensuring **memory protection** in a **contiguous memory allocation scheme.**