**1. \_\_External\_\_\_\_\_\_\_\_ memory consists of peripheral storage devices, such as disk and tape.**

**2. One byte equals \_\_\_8\_\_\_\_\_\_\_ bits.**

**3. From a user’s point of view two the most important characteristics of memory are capacity and performance\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**4. The three performance parameters for memory are: access time, transfer rate, and \_\_memory cycle time\_\_\_\_\_\_\_.**

**5. \_\_Associative\_\_\_\_\_\_\_ is a random access type of memory that enables one to make a comparison of desired bit locations within a word for a specified match, and to do this for all words simultaneously, thus retrieving a word based on a portion of its contents rather than its address.**

**6. The \_\_transfer\_\_\_\_\_\_ rate is the rate at which data can be transferred into or out of a memory unit.**

**7. The most commonly used physical types of memory are: semiconductor memory, \_\_magnetic surface\_\_\_\_\_\_\_\_ memory (used for disk and tape), and optical and magneto-optical.**

**8. The three key characteristics of memory are capacity, access time, and \_\_\_cost\_\_\_\_.**

**9. External, nonvolatile memory is referred to as \_\_\_secondary\_\_\_\_\_\_\_\_ or auxiliary memory.**

**10. The cache consists of blocks called \_\_lines\_\_\_\_\_\_\_\_.**

**11. \_\_\_Virtual\_\_\_\_\_\_\_ memory is a facility that allows programs to address memory from a logical point of view, without regard to the amount of main memory physically available.**

**12. For set-associative mapping the cache control logic interprets a memory address as three fields: Set, Word, and \_\_Tag\_\_\_\_\_\_\_\_.**