

3 Hardware – Part 1 — Answers

Answers

3.1 Hard disk drive (or solid-state drive, optical disc, USB flash drive).

3.2 Output = 0 (NOT inverts the input).

3.3 Primary memory is fast and used directly by the processor while running; secondary storage is slower but keeps data permanently (even with the power off). (Any clear difference.)

3.4 RAM is volatile — “volatile” means its contents are lost when the power is switched off.

3.5 OR gives 1 when either input is 1:
 $0, 0 \rightarrow 0$; $0, 1 \rightarrow 1$; $1, 0 \rightarrow 1$; $1, 1 \rightarrow 1$.

3.6 RAM is fast but volatile and limited in size, so it cannot keep data when the power is off; a hard disk is large and permanent but slow. Using both gives fast working memory *and* large permanent storage.

3.7 A AND B is 1 only when both are 1, and NOT inverts it:
 $0, 0 \rightarrow 1$; $0, 1 \rightarrow 1$; $1, 0 \rightarrow 1$; $1, 1 \rightarrow 0$.