8. (a) (i) *Award **[3 max]**.*

RAM acts as temporary storage of data, instructions and programs currently running (for the operating system and for the running applications) whilst ROM is permanent memory (stores the instructions and data that won't change/stores the instructions that the computer needs in order to boot up;
Memory access, both read and write operations are performed on RAM whilst ROM works with read only operation;
If power failures happened during access to RAM then all data will be permanently lost/RAM is volatile memory/whilst if power failure happened during the ROM access no data will be lost/ROM is non-volatile memory; **[3]**

(ii) *Award **[1]** for the answer saying that the function of OS in primary memory management is allocation of specific memory blocks to individual programs and **[1]** for reallocation up to **[2 max]**.*

A part of the OS (memory manager) assigns that block of memory to the program when a running program requests a block of memory;
When the program no longer needs the data in previously allocated memory blocks, they become available for reassignment;

OS ensures the availability of adequate memory for data structures/objects of each running program at all times;
By allocating the memory portions to programs after freeing the space (of the computer memory);

OS (memory management unit) uses virtual memory which provides secondary memory (external storage) for program that does not have enough space in RAM for execution;
After execution of the program this memory is reallocated (used by other programs)/freed;

*Note to examiners: Award only **[1]** an answer such as "OS maintains file allocation table".* **[2]**