CHAPTER 7: The Main Memory

PASTPAPERS

N.B. These pastpapers may rely on the knowledge gained from the **previous chapters.**

1 SEC'98-PAPER 2B-Q4C

Why does fast access RAM improve the overall performance of a computer **[3]** system?

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(a) Mention one input device, one output device and one input/output device found in a computer system. **[3]**

(b) What do you understand by the term multimedia? **[2]**

(c) Briefly describe ONE use of multimedia OUTSIDE the field of entertainment. **[3]**

(d) It is known that different devices have different access speeds. Describe, by giving an example, the technique used to reduce the speed difference between these devices. **[3]**

(e) How many storage is needed to represent an image whose resolution is of 1024x768 and uses a 24-bit color representation? **[2]**

(f) Why is there the need of having both RAM and ROM in a computer system? **[4]**

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a) The ASCII code is said to be an 8-bit code. How many different characters can be represented by the ASCII code?   **[1]**

b) Is the ASCII code suitable for representing a non-English alphabet? What is the solution to this problem?   **[3]**

c) What do you understand by the term *register*? Mention *ONE* example of a register commonly found in the CPU.   **[3]**

d) Represent the following numbers in an 8-bit register using 2's complement:
    i.   -27
    ii.   84
    iii. -100   **[6]**

e) Represent 01001011_2 and 00001100_2, in hexadecimal.   **[4]**

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