



ICM

SEPTEMBER 2016

COMPUTER APPRECIATION & APPLICATIONS

Instructions to candidates:

- a) Time allowed: Three hours (plus an extra ten minutes' reading time at the start – do not write anything during this time)
 - b) Answer ALL sections of Question 1 and any THREE questions chosen from 2 to 6
 - c) Question 1 carries 40 marks and each other question carries 20 marks. Marks for sections of questions are shown in []
 - d) The number of marks allocated for each section should determine the length of your answer and the amount of time you spend on it. Generally ONE point gains ONE mark and is rarely achieved by one-word answers. Spend about one hour on Question 1
 - e) Note carefully that where some questions require details of how hardware or software achieves its task, descriptions of user actions will NOT earn marks
 - f) No computer equipment, books or notes may be used in this examination
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1.
 - a) List and briefly describe the functions of TWO INPUT devices and TWO OUTPUT devices a computer may use. [4]
 - b) Draw a diagram to show the basic flow of information in a computer. Include input, processor and memory and output in your diagram. [4]
 - c) Define and describe the functions of RAM and ROM in a computer. Clearly explain the difference. [4]
 - d) Define the terms LAN and WAN and describe when each is likely to be used. [4]
 - e) What are the benefits for a company of having a LAN instead of stand-alone computers. Consider costs, size of company, storage and access. [4]
 - f) Consider the security of a LAN. List and explain FOUR ways in which data or information is protected in an organisation. [4]
 - g) Describe TWO network topologies and how they differ. [4]
 - h) Explain what an ISP (or IAP) is and what they may provide. [4]
 - i) Give an example of a BROWSER and a SEARCH ENGINE. Briefly describe the function of EACH of them. [4]
 - j) List FOUR benefits of the use of email for an organisation. [4]
 2.
 - a) A small company had a room of five stand-alone computers for processing customer orders. These computers are now being linked into a LAN. Discuss the advantages and disadvantages of this conversion. [6]
 - b) Describe a BUSINESS application where a company would use a WAN. Ignore the use of email. Your answer should include details of what is input, what is held on file and who the users are. [10]
 - c) Name and describe, with a labelled diagram, ONE configuration (network topology) of LAN. [4]
 3. With reference to a spreadsheet model, write notes about EACH of the following. Your answers should explain each feature in full, with examples of usage.
 - a) Cell [2]
 - b) Formula [3]
 - c) Absolute and relative addresses [6]
 - d) Replication [4]
 - e) Standard functions [5]

continued overleaf

4. Relate answers in this question to a word-processing package. NAME the package you are describing.
- Define the terms **header** and **footer**. Describe how ONE of these may be implemented. Explain why one of them may contain a variable value. [5]
 - Explain how you can arrange that YOUR full name can be made to appear in any of your documents when only a few keys are pressed. Explain how to make this name appear. [5]
 - The format of an EXISTING completed document is to be changed so that one paragraph of it has a different font and point size from the remainder of the document. Explain how to achieve this. [4]
 - Define the term **mail merge**. Describe a REAL BUSINESS application where mail merge could be used and explain how this is achieved. [6]
- 5.
- Define **system life cycle**. Identify and briefly describe the stages of the life cycle in the order they are executed. [8]
 - Explain the methods a systems analyst might use to find out about an existing MANUAL system with a view to designing a replacement system using a computer. [6]
 - Suppose that the programs are to be written in-house. Describe the steps a programmer will take once the analyst has given him the detailed specification for a particular program. [6]
6. Details of all subscribers to a monthly trade magazine are held in a database. The table below shows PART of the data dictionary – other fields have been omitted to shorten the question.

ITEM	DATA TYPE	EXAMPLE – EXPLANATION
FamilyName	15 Characters	e.g. Salander
Initials	2 Characters	e.g. EJ
Address1	24 Characters	e.g. 45 Sweden Rd
Starting	Date	e.g. 02/05/10 = date when first issue sent
NoOfMonths	Integer	e.g. 12 = subscribed for a year
TotalCost	Numeric/decimal	e.g. 30.00 = local currency units
Paid	Numeric/decimal	e.g. 7.50 = amount paid so far

- Define the terms **field** and **record**, giving ONE example only of EACH from the above table. [4]
- Explain why one of the items is called **Address1** and not just **Address**. [4]
- The item 'STARTING' shows the date when the first magazine is sent to the subscriber. Explain why it is present and how the database program will use it. [4]
- Explain HOW, for any given issue, the editor of this magazine could use the database to determine reasonably accurately the number of copies he should arrange to be printed. The magazine is only available to subscribers. [4]
- List FOUR other items, not listed above, that you might expect to find in this database. Explain WHY EACH IS PRESENT. [4]