



DECEMBER 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. Spend about one hour on Question 1
 - 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
 - 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) A product barcode does not contain product price. Describe the steps that occur for the price to be obtained. Explain how, in a supermarket, the product price is obtained at the checkout when a product code is scanned. [4]
 - b) A bank customer has two numbers associated with his or her ATM card.
 - i Name these TWO numbers.
 - ii Describe the INTERNAL processes which grant authority for the machine to proceed with transactions using this card. [4]
 - c) Describe the stages that an email message goes through from the moment the sender presses the SEND button until the time that the recipient reads the message AT A LATER DATE. [4]
 - d) Name a particular configuration for a LAN and draw a labelled diagram. [4]
 - e) Name TWO system programs and explain the purpose of EACH. [4]
 - f) State FOUR advantages of using a NUMERIC code for a product rather than using its real name. [4]
 - g) Explain what is meant by **systems life cycle**. Name any THREE stages of this cycle. For EACH explain its purpose in ONE sentence. [4]
 - h) Name FOUR tasks that a professional business programmer undertakes in his normal course of duty. [4]
 - i) Spreadsheet programs provide a large number of STANDARD FUNCTIONS. Define **function**. Name such a function and describe a particular example of its use. [4]
 - j) The membership secretary of a club learns that his work is to be computerised. List FOUR ways in which his work will be changed or improved. Your answer MUST refer specifically to this application. [4]
 2.
 - a) Distinguish clearly between the terms validation and verification. [4]
 - b) Explain why automatic validation is performed when data is FIRST entered into a computer. [4]
 - c) Below is CORRECT data held in a college file for a particular student:

Name	John Brown
Student number	12343
Date of birth	23/12/1983
Fees due	123.45

Write down similar data for another student but with an error in each item, which the COMPUTER would be able to detect as being INCORRECT. Ensure the errors are of DIFFERENT TYPES. In EACH case, explain why the program would be able to detect the error. [8]
 - d) Give TWO specific examples where a computer would NOT be able to detect an error, explaining why in EACH case. [4]

3. a) A LARGE international business has its own computer department whose staff perform each of the following tasks:
- Develop new in-house programs
 - Provide maintenance of these programs
 - Install standard packages on computers
 - Provide hardware maintenance
- Select THREE different job titles of people who work in this department. For EACH state the job title and what the job entails. [5 each]
- b) Discuss the benefits that the Internet can bring to a BUSINESS. [5]
4. Choose FOUR data input devices which would be used for entry of BUSINESS DATA. For EACH briefly describe:
- an application where the device would be typically used
 - the form in which data is presented to the computer and
 - how the device is physically able to read the data [5 each]
5. a) Distinguish between RAM and ROM. [4]
- b) Draw a diagram showing the basic configuration of a computer with input, output and storage facilities. [4]
- c) Define the term **OMR** and explain precisely WHY it is used in the marking of examination papers. [4]
- d) Select TWO different TYPES of printers. For EACH, describe how data in memory is physically printed. [8]
6. Below is PART of a spreadsheet model showing expenditure made by a department on day-to-day office expenses.

	A	B	C	D	E	F
1	2012	SUNDRIES				
2	Purchase Date	Item	Qty	Unit Price	Total Cost	Balance
3		BALANCE B / F				53.8
4	14/6/2012	Ink cartridge	2	14.6	29.2	83
5	24/6/2012	Box of paper	3	5.25	15.75	98.75
6	23/7/2012	A4 Envelopes	20	0.18	3.6	102.35
7					

For the tasks below:

- explain HOW each is achieved
 - state WHERE the cursor is positioned before action is taken at each stage
- Avoid references to function keys unless you explain what each achieves. Give your answers either as commands for a particular spreadsheet program or as precise explanations. State the NAME OF THE SPREADSHEET program you are describing.
- a) All figures in columns E and F after row 3 are calculated automatically by the spreadsheet program from columns C and D. [6]
- b) A total is required for column E in row 7, which should change automatically if any figures are changed. [4]
- c) All money values in columns D, E and F should have 2-decimal-place format. [4]
- d) New purchases are made on 4/7/2012 and 15/7/2012 which must be inserted in date order into the account. HOW will row and column totals be adjusted? [4]
- e) All dates should be displayed in the format '14 June' rather than '14/6/2012' [2]