



JUNE 2016

GENERAL PURPOSE SOFTWARE

**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 any FOUR questions
- c) Each question carries 25 marks. Marks for sections of questions are shown in [ ]
- d) Mark allocations should determine the length of your answers and the time you spend on each part. Generally, ONE valid point scores ONE mark
- e) Ensure that you pay particular attention to words underlined, in CAPITALS or in **bold**. FEW OR NO MARKS will be awarded to any question where these are ignored
- f) Where you are asked HOW to achieve a particular result using a named package, explain in general terms how it is achieved rather than listing particular keys to be pressed, which will vary from package to package, i.e. 'Mark the sentence from start to end' rather than 'Press F4'
- g) You are advised to read an entire question before answering any part of it
- h) No computer equipment, books or notes may be used in this examination

1. a) The diagram below shows PART of a model for costing items by adding costs of manufacturing and of distribution and then increasing by a mark-up percentage which is held in D1.

	A	B	C	D
1			MARKUP %	10
2	Product code	Manufacture	Distribution	Price
3	12345	8.00	2.00	11.00
4	67890	15.00	1.75	
5	24680	25.88	3.60	

The formula: = (B3+C3)\*(100+D1)/100 has been keyed into D3.

This formula is to be repeated for rows 4 to 50 so that on row 4, B3 and C3 become B4 and C4 and so on down to row 25. However, D1 is to be UNCHANGED FOR EVERY LINE.

- i Explain in detail how this can be achieved without having to type a formula for price in each cell of column D. [5]
  - ii Explain why brackets are needed in the formula. [2]
  - iii Explain why this model can be considered to be a 'What-if' use of a spreadsheet. [3]
  - iv Column E is to be added to contain the cost values from D but increased by an extra 10% only if the manufacturing costs exceed 20.00. Write a formula for E3 which must still be correct if any of the figures of the spreadsheet are changed. [3]
- b) Explain how to sort the data in the above table so that it is in ASCENDING order of product code. [4]
  - c) Select any other built-in function of a spreadsheet program and explain how it is used. [4]
  - d) A scatter diagram is required to show the spread of costs between manufacturing and distribution for the individual items. Explain how to achieve this. [4]

2. Details of all patients admitted into a LARGE city hospital are held on a database. The hospital administrator is also the database administrator and will constantly make enquiries of the database to provide information from it.
- Define the terms **field**, **file** and **record** giving a SINGLE example of EACH chosen from this hospital application. [6]
  - Explain HOW to achieve the following tasks:
    - Create and define the original structure of this database.
    - Produce a list showing the names of those patients who are scheduled to have operations tomorrow. You will need to name items in the database necessary for this. [8]
  - When a doctor requests details of a patient, the administrator will print a short report about that patient. List THREE items of data, apart from full name, which would be printed about the patient. [3]
  - Most datatypes are text or numeric or variations of these. Name a totally different datatype and give a real example of its use in this application. [3]
  - The following is a table defining a purchase order. Explain how this would be reorganised after FIRST-ORDER normalisation.
 

PurchaseOrder =	OrderNumber	
	+ SupplierCode	
	+ SupplierName	
	+ SupplierAddress	
	+ DateOfOrder	
	+ (StockCode	{These are
	+ StockName	{repeated for
	+ QuantityOrdered	{every
	+ UnitPrice	{item
	+ CostOfItem)	{purchased
	+ TotalCostOfOrder	
	+ ModeOfTransport	{may not be present

You may abbreviate the names (e.g. ON = OrderNumber) [5]
3. Write notes about FIVE of the following. State the operating system and version to which you relate your answer.
- Clipboard
  - Icons and other ways of activating software
  - Customising the desktop display
  - File management
  - Printer definition files
  - Multi-tasking
- Full marks can be gained by making FIVE different and relevant points for EACH. [5 each]
4. You have recently been appointed as the new administrator in the sales office of a large company. Each month, a newsletter is distributed to all staff in the sales department. All previous newsletters produced before you arrived have been saved on disk files. ALL your answers to this question must specifically relate to THIS situation and you must explain in general terms – a list of function keys pressed will NOT earn marks.
- Part of the newsletter is printed in newspaper format with THREE narrow columns on each page. Explain how this is set up and how the text can be entered and later amended. [4]
  - One feature included each month is a numbered list of the best sales performances showing the salesmen's names, total sales made (descending order) and the position each held in the previous month. Explain how you could copy the equivalent section from the previous newsletter and then change the order and values as appropriate. [4]
  - You have decided to include **headers** and **footers** in the newsletter. Define these terms precisely and explain how to implement ONE of them. Explain why there might be a variable item in one of these. [4]
  - Also included is a graph showing total sales performance for all staff over each of the last 12 months. The data values are held in a table as a small part of a SPREADSHEET model which the sales manager holds. Explain how you would create the graph and include it in your newsletter. [4]
  - Suggest TWO features of the word processing program you would use when you consider the work is complete and BEFORE you print it out. In EACH case, explain WHY these features are useful. [4]
  - It has been decided that, in future, each staff member will be sent a personalised newsletter. Mail merge will be used. Explain how to set this up and send the first issue. [5]

5. a) Explain why an operating system is a necessary part of the computer. Your answer must not just list facilities provided. [3]
- b) File management is one feature of an operating system. Describe FIVE different tasks a USER can perform through commands (or other ways) which relate to disc files. [10]
- c) Write notes about EACH of the following components of the Windows™ operating system. Assume your answers are part of a training manual for beginners.
- i Operation of the mouse and its various buttons
  - ii Folders/directories
  - iii Pull-down menus [4 each]