



**INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY
HIGHER LEVEL AND STANDARD LEVEL
PAPER 1**

Thursday 20 May 2010 (afternoon)

Candidate session number

1 hour

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INSTRUCTIONS TO CANDIDATES

- Write your session number in the boxes above.
- Do not open this examination paper until instructed to do so.
- Answer all the questions in the spaces provided.



1. A Linux based sub-notebook is a popular type of personal computer (PC). It is much smaller than a normal laptop and has no CD drive or hard disk. Storage is achieved by the use of integral flash memory. It is much cheaper, smaller and lighter than a normal laptop. Much of the software used is open source software*.

A specification for a sub-notebook is given below.

Specifications:

| | |
|-----------------------|---------------|
| CPU speed | 900 Mhz |
| Operating system | Linux |
| Display size | 7" (800×480) |
| RAM | 512 MB |
| Flash | 4000 MB |
| Battery life (tested) | 3.4–4.1 hours |
| Weight | 920g |
| Size (w/h/d) | 225/165/35 mm |

Physical Interfaces:

- 10/100 Mbit Ethernet
- MMC/SD card reader
- 3 USB 2.0 ports

Wireless Interfaces:

- 802.11b/g



Image used with permission.



Additional Specifications and Accessories (can vary):

- Built-in camera
- Microphone
- Speakers
- Linux
- Open office
- Choice of other open source software

* open source software: software that can be freely distributed and modified by users

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(Question 1 continued)

- (a) Identify **two** ways in which this personal computer can communicate with other devices. *[2 marks]*

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- (b) A travelling businessman has decided to take a sub-notebook PC with him when he is away from the office, instead of a normal laptop. Describe **two** disadvantages of this decision. *[4 marks]*

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(Question 1 continued)

- (c) Many consumers are now purchasing personal computers with open source software rather than commercial software installed. Explain reasons for this trend. *[4 marks]*

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(Question 2 continued)

- (c) Examiners are trained in the use of the new software with an online training package. Explain **one** advantage and **one** disadvantage of using online training for this purpose.

[4 marks]

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3. In many cities, an information system records where buses are on the route and can display information to people waiting at the bus stops. The bus stops have displays which show when the next bus is due and where it is going.



[Source: <http://secondavesagas.files.wordpress.com/2007/08/londonbus813.jpg>, 1 June 2009]

- (a) Define the term *information system*.

[2 marks]

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(Question 3 continued)

- (b) Describe how the information system is able to provide an up-to-date display such as the one shown in the image on the previous page.

[4 marks]

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- (c) Explain ways in which the information system could be used to improve the efficiency of the bus service.

[4 marks]

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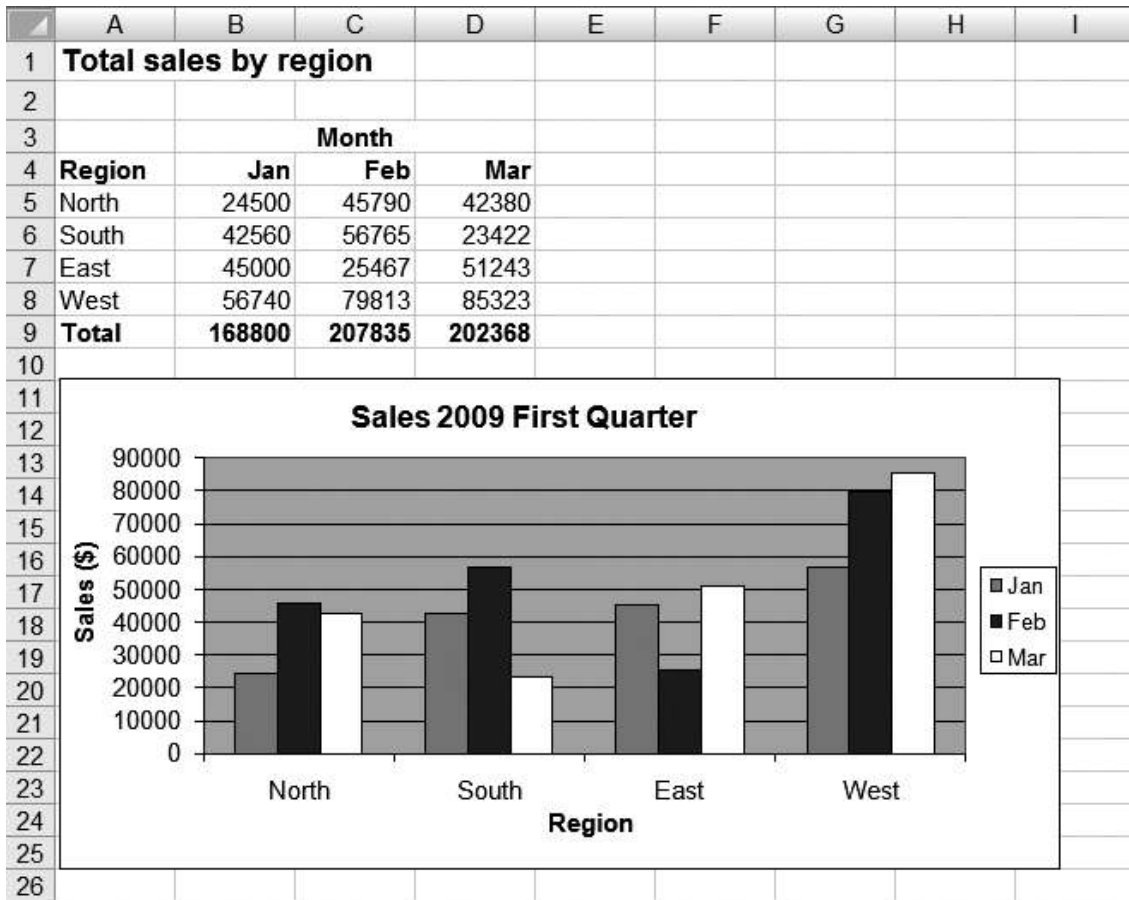
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4. The office workers in the sales department of a company make extensive use of spreadsheets for many purposes. They use formulae and functions to perform calculations. Each worker sets up spreadsheets to do the work as required. Every three months, they are required to print out a sales report that produces a chart of sales figures such as the one in the screenshot below.



- (a) The value in cell B9 was calculated using the SUM function. Identify **two** features of a spreadsheet function.

[2 marks]

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(Question 4 continued)

- (b) Describe the steps taken to produce the chart in the spreadsheet on the previous page.

[4 marks]

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- (c) Many companies allow individuals to create their own macros to carry out standard tasks. Explain **one** advantage and **one** disadvantage of the use of macros.

[4 marks]

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