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## Chapter # 1

May June 2013 ( 0417/11/M/J/13)

**14** Describe **three** drawbacks of using a command line interface (CLI) operating system.

- 1 .....
  - 2 .....
  - 3 .....
- ..... [3]

May June 2013 ( 0417/12/M/J/13)

**8** Describe **four** features of ROM.

- 1 .....
  - 2 .....
  - 3 .....
  - 4 .....
- ..... [4]

# Information & Communication Technology (ICT-0417)

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May June 2013 ( 0417/12/M/J/13)

11 Give **three** advantages of using a graphical user interface (GUI) rather than a command line interface (CLI).

- 1 .....
- .....
- 2 .....
- .....
- 3 .....
- ..... [3]

May June 2013 ( 0417/13/M/J/13)

5 Tick whether the following statements apply to **RAM** or apply to **ROM**.

	RAM	ROM
This memory can only be read from not written to.		
This memory is not volatile.		
This memory is used to store the data the user is currently working on.		
This memory is used to store the startup instructions of a computer.		

[4]

# Information & Communication Technology (ICT-0417)

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May June 2012 ( 0417/11/M/J/12)

**9** Explain why computer systems have both backing storage and RAM.

.....  
.....  
.....  
.....  
.....  
..... [3]

May June 2012 ( 0417/13/M/J/12)

**16** Describe **four** features of a graphical user interface (GUI).

1 .....  
.....  
2 .....  
.....  
3 .....  
.....  
4 .....  
..... [4]

# Information & Communication Technology (ICT-0417)

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May June 2011 ( 0417/11/M/J/11)

11 Describe the differences between RAM and ROM.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

May June 2011 ( 0417/12/M/J/11)

3 Tick **TRUE** or **FALSE** next to each of these statements.

	TRUE	FALSE
Measuring software is used to write letters		
DTP software is used to create magazines		
PDA's cannot be used unless plugged in to an electricity socket		
Database software is used to create slide shows		
A working knowledge of HTML is helpful when creating web pages		

[5]

# Information & Communication Technology (ICT-0417)

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Oct Nov 2013 (0417/11/O/N/13)

13 Describe the differences between a CLI (Command Line Interface) and a GUI (Graphical User Interface).

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

Oct Nov 2013 (0417/12/O/N/13)

3 Tick hardware or software next to each item as appropriate.

	hardware	software
virus checker		
keyboard		
chip		
mobile phone		

[4]

## Information & Communication Technology (ICT-0417)

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Oct Nov 2013 (0417/13/O/N/13)

3 Tick **True** or **False** next to each of these statements.

	<b>True</b>	<b>False</b>
A network card is an example of hardware.		
A light sensor is an example of software.		
Icons are part of a Graphical User Interface.		
A magnetic tape has a greater storage capacity than a CD.		
Laser printers are quieter than a dot matrix printer.		

[5]

Oct Nov 2013 (0417/13/O/N/13)

5 Tick **True** or **False** for the following statements.

	<b>True</b>	<b>False</b>
A magnetic tape has faster data access than a DVD ROM.		
A CD is used to store a two hour high definition movie.		
A magnetic disc is used for online processing.		
Pen drives are used to copy data from one computer to another.		

[4]

# Information & Communication Technology (ICT-0417)

Oct Nov 2012 (0417/11/O/N/12)

1 Name the devices A, B, C and D using words from the list.



digital camera

number pad

remote control

scanner

speaker

touch pad

trackerball

web cam

A .....

B .....

C .....

D .....

[4]



# Information & Communication Technology (ICT-0417)

---

Oct Nov 2012 (0417/11/O/N/12)

3 Tick **True** or **False** next to each of these statements.

	<b>True</b>	<b>False</b>
Computer programs are examples of software.		
A web authoring package is an example of hardware.		
An icon is a component of a command line interface.		
A mobile phone (cell phone) uses flash memory.		

[4]

Oct Nov 2012 (0417/12/O/N/12)

5 Tick **True** or **False** for the following statements.

	<b>True</b>	<b>False</b>
ROM is volatile.		
ROM is used to store the startup instructions of a computer.		
The data in ROM is easier to change than that in RAM.		
ROM is used to store the data the user is currently working on.		

[4]

# Information & Communication Technology (ICT-0417)

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Oct Nov 2012 (0417/13/O/N/12)

- 5 Draw **five** lines on the diagram to match the software to its most **appropriate** use.

Software	Use
Desktop publishing software	keeping a record of phone numbers
Measuring program	matching illnesses to symptoms
Presentation software	producing a multimedia slideshow
Inference engine	monitoring the weather
Database	producing a magazine

[5]

Oct Nov 2012 (0417/13/O/N/12)

- 6 Tick whether the following statements apply to a **CLI** (Command Line Interface) or a **GUI** (Graphical User Interface).

	CLI	GUI
Instructions must be typed to get a computer to carry out an action.		
Icons represent programs.		
It is more important that users understand how a computer works.		
Menus are offered to help choose an action.		

[4]

# Information & Communication Technology (ICT-0417)

Oct Nov 2011 (0417/11/O/N/11)

3 Tick **TRUE** or **FALSE** next to each of these statements.

	TRUE	FALSE
Computer programs are examples of hardware		
An internet browser is an example of software		
A pointer is used to select items in a command line interface		
A PDA is larger than a desktop computer		

[4]

Oct Nov 2011 (0417/11/O/N/11)

6 Susan uses a memory stick to transfer her work from school to home. Give **three** reasons why memory sticks are often preferred to CDs for storing work.

.....

.....

.....

.....

.....

.....

.....

[3]

Oct Nov 2011 (0417/12/O/N/11)

3 Tick **TRUE** or **FALSE** next to each of these statements.

	TRUE	FALSE
A magnetic stripe reader is an example of hardware		
A memory stick is an example of software		
A word processor is a form of operating system		
A CD has a greater storage capacity than a DVD		

[4]

# Information & Communication Technology (ICT-0417)

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Oct Nov 2011 (0417/12/O/N/11)

6 Tick **TRUE** or **FALSE** for the following statements.

	TRUE	FALSE
RAM is volatile		
RAM is used to store the startup instructions of a computer		
The data in ROM is easier to change than that in RAM		
ROM is used to store the data the user is currently working on		

[4]

Oct Nov 2011 (0417/13/O/N/11)

5 Draw five lines on the diagram to match the software to how it could be used in a school.

Software	Use
Word processing software	finding specific web sites
Measuring program	storing student records
Presentation software	writing a letter to parents
Search engine	monitoring temperature in a science experiment
Database	producing a multimedia slide show

[5]

## Chapter # 2

May June 2013 (0417/11/M/J/13)

- 1 Name the output devices **A**, **B**, **C** and **D** using the words from the list.

**A**



**B**



**C**



**D**



CRT monitor

digital camera

graph plotter

laser printer

multimedia projector

scanner

TFT monitor

web cam

A .....

B .....

C .....

D .....

[4]

- 2 Ring two items which are input devices.

DVD RAM

laser printer

magnetic disc

number pad

speakers

trackerball

[2]

# Information & Communication Technology (ICT-0417)

May June 2013 (0417/12/M/J/13)

1 Name the input devices A, B, C and D using the words from the list.

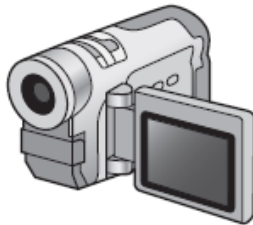
A



B



C



D



keyboard

microphone

remote control

scanner

sensor

touch pad

touch screen

video camera

A .....

B .....

C .....

D .....

[4]

2 Ring two output devices.

buzzer

DVD R

joystick

magnetic tape

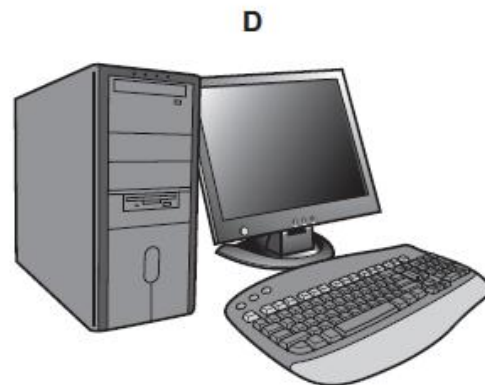
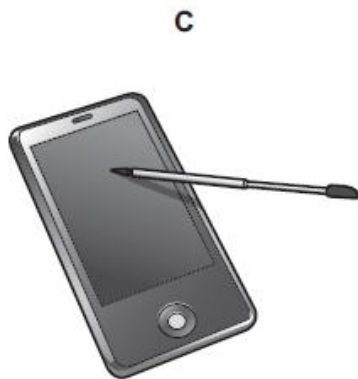
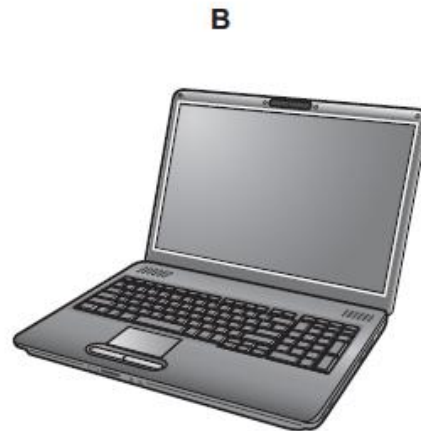
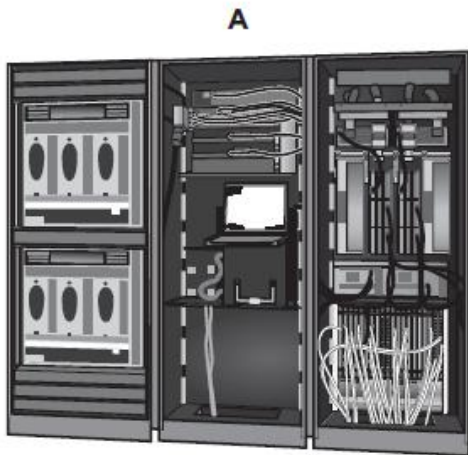
plotter

touch pad

[2]

May June 2013 (0417/13/M/J/13)

1 Name the devices A, B, C and D using the words from the list.



CRT Monitor      desktop computer      laptop computer      mainframe computer  
microphone      multimedia projector      personal digital assistant      printer

A .....

B .....

C .....

D .....

[4]

# Information & Communication Technology (ICT-0417)

May June 2013 (0417/13/M/J/13)

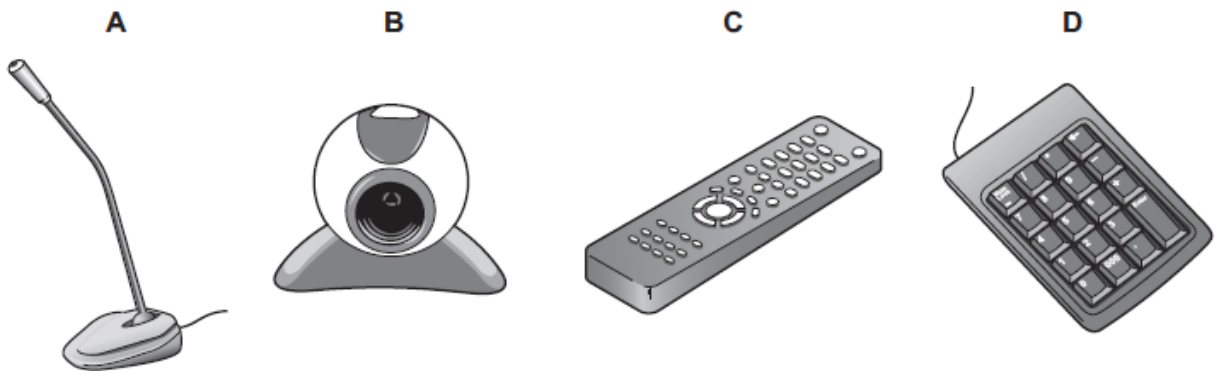
6 Draw four lines on the diagram to match the use to its **most appropriate** input device.

Use	Input device
To input details from a bank card	Joystick
To input data from a school register	Chip reader
To input details of a product in a supermarket	Optical mark reader
To control an object in a computer game	Bar code reader

[4]

May June 2012 (0417/11/M/J/12)

1 Name the input devices **A**, **B**, **C** and **D** using the words from the list.



digital camera

microphone

number pad

remote control

scanner

touch pad

trackerball

web cam

A .....

B .....

C .....

D .....

[4]



May June 2012 (0417/12/M/J/12)

1 Name the output devices **A**, **B**, **C** and **D** using the words from the list.

**A**



**B**



**C**



**D**



CRT monitor

dot matrix printer

laser printer

motor

multimedia projector

plotter

speakers

trackerball

A .....

B .....

C .....

D .....

[4]

2 Ring **two** items which are input devices.

buzzer

DVD R

joystick

magnetic tape

plotter

touch pad

[2]

# Information & Communication Technology (ICT-0417)

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May June 2012 (0417/12/M/J/12)

8 Complete each sentence below using **one** item from the list.

- |                          |                                    |                             |
|--------------------------|------------------------------------|-----------------------------|
| <b>A bar code reader</b> | <b>A buzzer</b>                    | <b>A dot matrix printer</b> |
| <b>A graph plotter</b>   | <b>A monitor</b>                   | <b>A light pen</b>          |
| <b>A light sensor</b>    | <b>An optical character reader</b> | <b>A trackerball</b>        |
| <b>A web camera</b>      |                                    |                             |

- (a) ..... is used to input data in a computer controlled greenhouse.
- (b) ..... is used to input text to a computer ready for processing.
- (c) ..... is used to input numbers from products at a POS terminal.
- (d) ..... is used to input moving pictures from a fixed position into a computer.
- (e) ..... is used for drawing applications where a graphics tablet might be too big.

[5]

May June 2012 (0417/13/M/J/12)

2 Ring **two** items which are output devices.

- |                    |                |                      |
|--------------------|----------------|----------------------|
| <b>CRT monitor</b> | <b>DVD ROM</b> | <b>magnetic tape</b> |
| <b>number pad</b>  | <b>plotter</b> | <b>trackerball</b>   |

[2]

# Information & Communication Technology (ICT-0417)

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May June 2012 (0417/13/M/J/12)

4 Complete each sentence below using **one** item from the list.

A bar code reader

A dot matrix printer

A graphics tablet

A laser printer

A microphone

A multimedia projector

A presence check

A speaker

A temperature sensor

A magnetic tape

- (a) ..... produces hard copy in harsh conditions.
- (b) ..... inputs sounds.
- (c) ..... is used to show slideshows.
- (d) ..... is a validation rule.
- (e) ..... is used to create backups from a server's hard disc.

[5]

May June 2012 (0417/13/M/J/12)

6 Draw four lines on the diagram to match the use to its most appropriate input device.

Use	Input device
to select options from a list	keyboard
to type data into a database	optical mark reader
to input candidate examination answers	chip reader
to input data directly from a bank card	mouse

[4]

## Information & Communication Technology (ICT-0417)

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May June 2011 (0417/11/M/J/11)

- 2 Ring two items which are output devices.

**Buzzer**

**DVD RAM**

**Joystick**

**Magnetic tape**

**Plotter**

**Touch pad**

[2]

May June 2011 (0417/12/M/J/11)

- 4 Complete each sentence below using **one** item from the list.

**A bar code reader**

**A buzzer**

**A dot matrix printer**

**A graph plotter**

**A graphics tablet**

**An inkjet printer**

**A pressure sensor**

**OCR**

**A trackball**

**A webcam**

- (a) ..... is used to input a hand drawn image to the computer.
- (b) ..... is used to input data to a microprocessor controlled weighing scale.
- (c) ..... is an input device used by people with limited motor skills.
- (d) ..... is an output device used to produce large hard copies of car designs.
- (e) ..... is an output device used in microwave ovens.

[5]

# Information & Communication Technology (ICT-0417)

May June 2011 (0417/13/M/J/11)

2 Ring **two** items which are input devices.

Flash memory card

Graph plotter

Graphics tablet

Laser printer

Magnetic disc

Touchpad

[2]

3 Tick **TRUE** or **FALSE** next to each of these statements.

	TRUE	FALSE
Presentation software is used to create slide shows		
Laptop computers do not have USB ports		
DTP software can be used to produce databases		
Measurement software is used to create magazines		
Buzzers are input devices		

[5]

May June 2011 (0417/13/M/J/11)

4 Complete each sentence below using **one** item from the list.

A bar code reader

A dot matrix printer

A graphics tablet

A laser printer

A microphone

A multimedia projector

A presence check

A speaker

A temperature sensor

A web cam

- (a) ..... is used to input data about products at a POS.
- (b) ..... is used to produce high quality hard copy.
- (c) ..... sends data to a microprocessor in a washing machine.
- (d) ..... is used to input freehand drawings to a computer.
- (e) ..... is used to output sounds from the computer.

[5]

# Information & Communication Technology (ICT-0417)

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May June 2011 (0417/13/M/J/11)

7 Draw **four** lines on the diagram to match the use to its most **appropriate** output device.

Use	Output device
to produce very large high quality hard copy	dot matrix printer
to display data from a computer on to a large screen	plotter
to alert mobile phone users to incoming calls	multimedia projector
to output multipart forms	buzzer

[4]

### Chapter # 3

May June 2013 (0417/11/M/J/13)

6 Draw four lines to match each storage medium to the most appropriate use in this list.

Storage medium	Use
Fixed hard disc	To transfer files from one computer to another
DVD ROM	Batch processing applications
Pen drive	To store operating systems
Magnetic tape	Publishers distributing encyclopaedias

[4]

May June 2013 (0417/11/M/J/13)

15 Optical discs and magnetic tapes are both used to store computer data.

Give **two** uses of optical discs and for each use give a reason why they are preferred to magnetic tapes.

Use 1 .....

.....

Reason 1 .....

.....

Use 2 .....

.....

Reason 2 .....

.....

[4]

# Information & Communication Technology (ICT-0417)

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May June 2013 (0417/12/M/J/13)

7 Use the **most appropriate** phrase from the list below to complete each sentence.

- store data in real time applications
- store high definition films
- store backups of file servers
- store music for sale
- store photographs in a digital camera

- (i) A CD ROM is used to .....
- (ii) A blu-ray disc is used to .....
- (iii) A magnetic tape is used to .....
- (iv) A flash memory card is used to .....

[4]

May June 2013 (0417/13/M/J/13)

2 Ring **two** items which are used to store data.

- |          |         |                 |
|----------|---------|-----------------|
| buzzer   | DVD R   | fixed hard disc |
| joystick | plotter | touch pad       |

[2]



# Information & Communication Technology (ICT-0417)

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May June 2012 (0417/11/M/J/12)

2 Ring **two** items which are used for storing data.

buzzer

DVD R

joystick

magnetic tape

plotter

touch pad

[2]

May June 2012 (0417/11/M/J/12)

8 Use the most appropriate phrase from the list below to complete the sentences.

retouch photographs.

print out photographs.

input candidate examination answers.

input data from a magnetic stripe.

store high definition copies of movies.

open windows in a greenhouse.

input data from a chip.

input temperature in a microprocessor controlled greenhouse.

(i) A blu-ray disc is used to .....

(ii) A graphics tablet is used to .....

(iii) An inkjet printer is used to .....

(iv) A motor is used to .....

(v) An Optical Mark Reader is used to .....

[5]

# Information & Communication Technology (ICT-0417)

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May June 2012 (0417/12/M/J/12)

6 Draw four lines on the diagram to match the use to its most appropriate storage medium.

Use	Storage medium
To store a high definition movie	Fixed hard disc
To store school work to take home	Blu-ray disc
To store server backups	Pen drive
To store an online database	Magnetic tape

[4]

May June 2011 (0417/11/M/J/11)

13 A student wishes to store data on an optical storage medium. List **two** optical media and give **one** advantage and **one** disadvantage of using optical media when compared with fixed hard discs.

Optical medium 1 .....

Optical medium 2 .....

Advantage .....

Disadvantage .....

[4]

# Information & Communication Technology (ICT-0417)

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May June 2011 (0417/12/M/J/11)

2 Ring **two** items which are storage media.

Buzzer

DVD RAM

Keyboard

Mouse

Memory stick

Sensor

[2]

May June 2011 (0417/13/M/J/11)

12 The main memory in computers is becoming very large. Give **three** reasons why backing storage is still needed.

1 .....

.....

2 .....

.....

3 .....

..... [3]

May June 2010 (0417/11/M/J/10)

6 Students can use CDs or pen drives for storing their work. Give **three** reasons why students may prefer to use pen drives.

1 .....

.....

2 .....

.....

3 .....

..... [3]

# Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/13/M/J/10)

2 Ring **two** items which are used for data storage.

**DVD ROM**

**Graph plotter**

**Graphics tablet**

**Magnetic tape**

**Projector**

**Trackerball**

[2]

May June 2010 (0417/13/M/J/10)

6 Tick **three** reasons why optical media may be used to store data rather than magnetic media.

	<input checked="" type="checkbox"/>
It is easier to transfer data to other computers using optical media rather than fixed hard discs	<input type="checkbox"/>
Optical media are cheaper to buy than magnetic media	<input type="checkbox"/>
A CD stores more data than a fixed hard disk	<input type="checkbox"/>
Data is easier to encrypt on optical media	<input type="checkbox"/>
Optical media provide quicker access to individual data items than magnetic tape	<input type="checkbox"/>
CD ROMs are easier to update than magnetic media	<input type="checkbox"/>

[3]

Oct Nov 2009 (0417/01/O/N/09)

2 Ring **two** items which are storage devices.

**Bar code reader**

**Keyboard**

**Laser printer**

**Memory stick**

**Mouse**

**Zip disc drive**

[2]

## Information & Communication Technology (ICT-0417)

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Oct Nov 2010 (0417/11/O/N/10)

2 Ring **two** items which are storage media.

**Bar code reader**

**DVD RAM**

**Joystick**

**Magnetic tape**

**Sensor**

**Touch screen**

[2]

Oct Nov 2010 (0417/11/O/N/10)

13 Draw **four** lines on the diagram to match the use to its most **appropriate** storage medium.

	Use	Storage medium
	storing data in online applications	<b>DVD ROM</b>
	to store data that cannot be changed	<b>Fixed hard disc</b>
	saving work and transporting it to other computers	<b>Magnetic tape</b>
	taking backups of file servers	<b>Pen drive</b>

[4]

Oct Nov 2010 (0417/12/O/N/10)

2 Ring **two** items which are storage media.

**Blu-ray disc**

**CD ROM**

**MICR**

**Motor**

**Sensor**

**Trackerball**

[2]

# Information & Communication Technology (ICT-0417)

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Oct Nov 2010 (0417/12/O/N/10)

- 11 Most PCs come with a hard disc drive. Give a reason why each of the following are also used with PCs.

Magnetic tape .....

.....

CD R .....

.....

DVD ROM .....

..... [3]

Oct Nov 2010 (0417/13/O/N/10)

- 2 Ring two items which are storage media.

Flash memory card

Graph plotter

Magnetic disc

OCR

OMR

Touch pad

[2]

Oct Nov 2010 (0417/13/O/N/10)

- 11 Explain why the following are used with PCs.

Pen drives .....

.....

Blu-ray .....

.....

Fixed hard disc drives .....

..... [3]

# Information & Communication Technology (ICT-0417)

---

Oct Nov 2011 (0417/11/O/N/11)

- 6 Susan uses a memory stick to transfer her work from school to home. Give **three** reasons why memory sticks are often preferred to CDs for storing work.

.....

.....

.....

.....

.....

.....

..... [3]

Oct Nov 2011 (0417/12/O/N/11)

- 4 Draw **five** lines on the diagram to match the storage device to its most appropriate use.

Storage Device	Use
Fixed hard disc	Making backups of a file server
Flash memory card	Transferring a file from one computer to another
Magnetic tape	Storing software sold by a company
Pen drive	Storing data which needs to be accessed quickly
DVD ROM	Storing photographs in a digital camera

[5]

Oct Nov 2011 (0417/13/O/N/11)

- 2 Ring **two** items which are used for data storage.

CD RW	Plotter	Hard disc
Keyboard	Mouse	PIN

[2]

# Information & Communication Technology (ICT-0417)

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Oct Nov 2011 (0417/13/O/N/11)

- 6 Describe **two** uses of optical media and for each one give a reason why optical media are preferred to magnetic tapes for that use.

Use 1 .....

Reason 1 .....

Use 2 .....

Reason 2 .....

..... [4]

Oct Nov 2012 (0417/11/O/N/12)

- 6 Ali wants to back up his data.

- (a) Give **two** reasons why making backups is necessary.

1 .....

2 .....

..... [2]

- (b) Ali thinks that making backups will prevent his data from getting viruses. Describe what a virus is and explain why Ali is wrong.

..... [3]



# Information & Communication Technology (ICT-0417)

---

Oct Nov 2012 (0417/12/O/N/12)

2 Ring **two** items which are used for data storage.

light pen

magnetic disc

motor

mouse

OCR

ROM

[2]

## Chapter # 4

May June 2009 (0417/01/M/J/09)

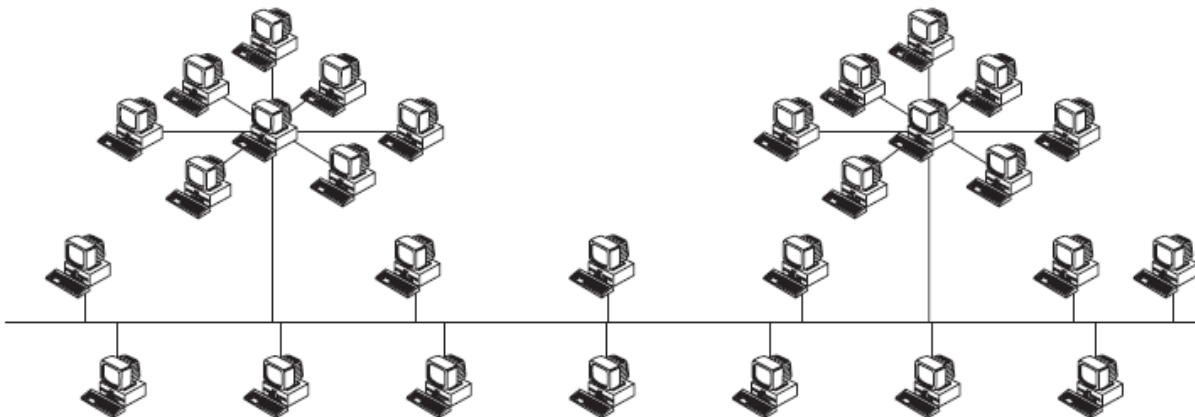
3 Tick **TRUE** or **FALSE** next to each of these statements.

	TRUE	FALSE
Encryption prevents hackers from deleting data.		
Back up procedures prevent hackers from accessing data on a computer.		
You should regularly change your password to make it more difficult for hackers to access your data.		
You should always log off after using a networked computer.		
You should always tell a friend your password in case you forget it.		

[5]

May June 2009 (0417/01/M/J/09)

7 Two types of network topology have been combined to form a larger network.



(a) Give the name of the type of the larger network topology ..... [1]

(b) Give the names of the other two types of topology in this network.

1 .....

2 ..... [2]

# Information & Communication Technology (ICT-0417)

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May June 2009 (0417/01/M/J/09)

(c) Complete each sentence below using one item from the list.

**A bridge**

**A hub**

**A proxy server**

**A switch**

(i)..... does not manage any of the data traffic through it.

(ii)..... forwards data packets to computers and printers.

(iii)..... can be a major component of a firewall.

(iv)..... usually only has two ports.

[4]

8 Tick **TRUE** or **FALSE** next to each of these statements which describe the use of e-mail compared to the normal postal service.

	TRUE	FALSE
E-mails can only be sent using a Post Office.		
You don't have to leave your house to send e-mail.		
It is quick to send the same message to many people using e-mail.		
It takes a long time for an e-mail to arrive.		

[4]

May June 2009 (0417/01/M/J/09)

- 17** Many companies use video conferencing instead of face-to-face conferencing. Discuss the advantages and disadvantages of this.

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.....

.....

[6]



# Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/11/M/J/10)

5 Complete each sentence below using **one** item from the list.

A hub

An intranet

A proxy server

A WAN

A WLAN

- (a) ..... is a device used to connect computers together to form a LAN.
- (b) ..... is a network with restricted access.
- (c) ..... can allow networked computers to connect to the internet.
- (d) ..... is a wireless local area network.

[4]

May June 2010 (0417/11/M/J/10)

8 Tick **three** developments which have arisen because of the internet.

	<input checked="" type="checkbox"/>
Web logs	<input type="checkbox"/>
Databases	<input type="checkbox"/>
Models	<input type="checkbox"/>
Wikis	<input type="checkbox"/>
DTP	<input type="checkbox"/>
Social networking sites	<input type="checkbox"/>

[3]

# Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/11/M/J/10)

12 Aftab and his family have three computers in their home. He wants to connect the computers into a network. Explain why he would need:

A router .....

A browser .....

Email .....

An ISP .....

[4]

# Information & Communication Technology (ICT-0417)

May June 2010 (0417/11/M/J/10)

13 The use of computer networks can lead to problems in keeping data secure and confidential.

(a) Tick **two** problems which can affect the security of data.

	<input checked="" type="checkbox"/>
Data encryption techniques are easy to crack	<input type="checkbox"/>
Data can be accessed without being in the building where it is stored	<input type="checkbox"/>
Data thieves often do not leave physical signs of robbery	<input type="checkbox"/>
Data passwords are easy to guess	<input type="checkbox"/>

[2]

(b) Tick **two** ways of increasing the confidentiality of data.

	<input checked="" type="checkbox"/>
Make backups of the data	<input type="checkbox"/>
Users should write down their password in case they forget it	<input type="checkbox"/>
Have a firewall connected to the network	<input type="checkbox"/>
Have different levels of access to the data	<input type="checkbox"/>

[2]

May June 2010 (0417/11/M/J/10)

17 Describe **three** items of hardware which would be needed, in addition to those normally supplied with a PC, in order to take part in a video conference.

- 1 .....
- .....
- 2 .....
- .....
- 3 .....
- .....

[3]



# Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/11/M/J/10)

21 When sending documents companies sometimes use email and sometimes use ordinary post.

(a) Give **two** reasons why email might be used.

1 .....

.....

2 .....

..... [2]

(b) Give **two** reasons why ordinary post might be used.

1 .....

.....

2 .....

..... [2]

May June 2010 (0417/13/M/J/10)

5 Complete each sentence below using **one** item from the list.

**Bluetooth**

**An intranet**

**A router**

**A WAN**

**A WLAN**

(a) ..... is a network connecting several LANs.

(b) ..... is a network with very little cabling.

(c) ..... can allow networked computers to connect to the internet.

(d) ..... is used to connect two mobile devices to each other.

[4]

# Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/13/M/J/10)

8 Tick **three** developments which have arisen because of mobile phones.

	✓
Sending emails	
Text messaging	
Sending a photograph as soon as it has been taken	
Using the internet	
Making a phone call wherever you are	
Leaving messages when somebody is not available	

[3]

May June 2010 (0417/13/M/J/10)

12 Ali and his family have three computers in their home. He wants to connect the computers into a network which will have access to the internet.

(a) Give **two** advantages of doing this.

- 1 .....
- .....
- 2 .....
- .....

[2]

(b) Give **two** disadvantages of doing this.

- 1 .....
- .....
- 2 .....
- .....

[2]

# Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/13/M/J/10)

- 13 The use of computer networks can lead to problems of keeping data secure and confidential. Two methods of overcoming this are the use of authentication techniques and data encryption.

(a) Tick **two** authentication techniques.

	<input checked="" type="checkbox"/>
Firewall	<input type="checkbox"/>
Passwords	<input type="checkbox"/>
Biometrics	<input type="checkbox"/>
An intranet	<input type="checkbox"/>

[2]

(b) Tick **two** features of data encryption.

	<input checked="" type="checkbox"/>
It makes it impossible to access computer systems	<input type="checkbox"/>
Only authorised users can understand the data	<input type="checkbox"/>
A key is needed to decrypt data	<input type="checkbox"/>
It prevents viruses	<input type="checkbox"/>

[2]

# Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/13/M/J/10)

17 Monica has purchased a laptop computer. Describe **three** additional things she would need in order to send an email.

1 .....

.....

2 .....

.....

3 .....

..... [3]

## Chapter # 5

May June 2013 (0417/11/M/J/13)

- 12 A Sports Science student had to analyse the performance of athletes after the 2012 Olympic Games. He created a spreadsheet to do this. Below is his analysis of the shot put event. It is split into two sheets. Sheet 1 contains the Code for each nationality. Sheet 2 contains a list of athletes and the results they achieved in events since the Olympics. In Sheet 2 he included the distance achieved by the 2012 Olympic gold medal winners.

	A	B
1	Code	Country
2	AUS	Australia
3	BRA	Brazil
4	CHN	China
5	EGY	Egypt
6	GBR	Great Britain
7	GER	Germany
8	IND	India
9	NZL	New Zealand
10	RSA	South Africa
11	RUS	Russia
12	USA	America

**Sheet 1**

(Commas are used as delimiters in the functions shown below.)

	A	B	C	D	E	F
1	Olympic record					
2	Shot Put	Name	Country	Distance		
3	Men	Tomasz Majewski	Poland	21.89		
4	Women	Valerie Adams	New Zealand	20.70		
5						
6	Country	Athlete	Code	Gender	Best	Record
7					throw	breaking
8	=LOOKUP(C8,Sheet1!\$A\$2:\$B\$12)	Tanya Safina	RUS	female	22.01	=IF(D8="male",IF(E8>\$D\$3,"yes","no"),IF(E8>\$D\$4,"yes","no"))
9	=LOOKUP(C9,Sheet1!\$A\$2:\$B\$12)	Mary Jones	GBR	female	22.12	=IF(D9="male",IF(E9>\$D\$3,"yes","no"),IF(E9>\$D\$4,"yes","no"))
10	=LOOKUP(C10,Sheet1!\$A\$2:\$B\$12)	Zhang Danliu	CHN	male	21.65	=IF(D10="male",IF(E10>\$D\$3,"yes","no"),IF(E10>\$D\$4,"yes","no"))
11	=LOOKUP(C11,Sheet1!\$A\$2:\$B\$12)	Lisa Sanderson	USA	female	17.52	=IF(D11="male",IF(E11>\$D\$3,"yes","no"),IF(E11>\$D\$4,"yes","no"))
12	=LOOKUP(C12,Sheet1!\$A\$2:\$B\$12)	Joanne Phelps	USA	female	19.42	=IF(D12="male",IF(E12>\$D\$3,"yes","no"),IF(E12>\$D\$4,"yes","no"))
13	=LOOKUP(C13,Sheet1!\$A\$2:\$B\$12)	Rory Gemell	GBR	male	21.13	=IF(D13="male",IF(E13>\$D\$3,"yes","no"),IF(E13>\$D\$4,"yes","no"))
14	=LOOKUP(C14,Sheet1!\$A\$2:\$B\$12)	Mary Rankin	NZL	female	22.44	=IF(D14="male",IF(E14>\$D\$3,"yes","no"),IF(E14>\$D\$4,"yes","no"))
15	=LOOKUP(C15,Sheet1!\$A\$2:\$B\$12)	Kimberley Brown	RSA	female	19.87	=IF(D15="male",IF(E15>\$D\$3,"yes","no"),IF(E15>\$D\$4,"yes","no"))
16	=LOOKUP(C16,Sheet1!\$A\$2:\$B\$12)	David Lewis	NZL	male	19.76	=IF(D16="male",IF(E16>\$D\$3,"yes","no"),IF(E16>\$D\$4,"yes","no"))
17	=LOOKUP(C17,Sheet1!\$A\$2:\$B\$12)	Maria Simplova	USA	female	20.04	=IF(D17="male",IF(E17>\$D\$3,"yes","no"),IF(E17>\$D\$4,"yes","no"))
18	=LOOKUP(C18,Sheet1!\$A\$2:\$B\$12)	Geraldine Pine	NZL	female	22.32	=IF(D18="male",IF(E18>\$D\$3,"yes","no"),IF(E18>\$D\$4,"yes","no"))
19	=LOOKUP(C19,Sheet1!\$A\$2:\$B\$12)	Joseph Swift	GBR	male	21.12	=IF(D19="male",IF(E19>\$D\$3,"yes","no"),IF(E19>\$D\$4,"yes","no"))
20	=LOOKUP(C20,Sheet1!\$A\$2:\$B\$12)	Li Song	CHN	male	19.23	=IF(D20="male",IF(E20>\$D\$3,"yes","no"),IF(E20>\$D\$4,"yes","no"))

**Sheet 2**

## Information & Communication Technology (ICT-0417)

---

(a) Explain what the function in cell A8 in Sheet 2 does.

.....  
.....  
.....  
.....  
.....  
..... [3]

(b) What country would you expect to see in cell A12 in Sheet 2?

..... [1]

(c) Explain what the function in cell F8 in Sheet 2 does.

.....  
.....  
.....  
.....  
.....  
..... [4]

(d) What value would you expect to see in cell F10 in Sheet 2?

..... [1]

(e) Spreadsheets are often used to produce computer models.

Give **three** reasons why computer modelling is used instead of the real thing.

1 .....  
.....  
2 .....  
.....  
3 .....  
.....

[3]

May June 2013 (0417/11/M/J/13)

- 13 Li has asked Sharon, a systems analyst, to create a new database system for his computer store. He only sells computers made by ZIKO. Here are some of the questions customers ask:

“Have you got a computer with a hard disc which stores more than 1000 Gigabytes?”

“Have you got a laptop which has a separate number pad?”

“Have you got a PC which costs less than \$500?”

- (a) Complete the data dictionary below filling in the field names and the **most appropriate** data types to create a database which would answer these questions.

Field name	Data type
	Integer
Separate_Number_Pad	

[6]

# Information & Communication Technology (ICT-0417)

May June 2013 (0417/12/M/J/13)

- 14 The manager of a travel company asked her secretary to look into the reliability of trains in Birmingham. The secretary obtained the details of some of the trains. He created two spreadsheets to help him do this.

Sheet 1 is a list of some of the UK stations that trains from Birmingham go to. Sheet 2 consists of the train details he looked at.

	A	B
1	Code	Station
2	E	Edinburgh
3	LB	Longbridge
4	B	Bournemouth
5	LI	Lichfield
6	S	Shrewsbury
7	W	Wolverhampton
8	LO	London
9	P	Plymouth

Sheet 1

(Commas are used as delimiters in the functions shown below.)

	A	B	C	D
1	Arrival Station	Code	Number	
2	=VLOOKUP(B2,Sheet1!\$A\$2:\$B\$9,2)	E	=COUNTIF(\$C\$9:\$C\$18,B2)	
3	=VLOOKUP(B3,Sheet1!\$A\$2:\$B\$9,2)	LO	=COUNTIF(\$C\$9:\$C\$18,B3)	
4	=VLOOKUP(B4,Sheet1!\$A\$2:\$B\$9,2)	S	=COUNTIF(\$C\$9:\$C\$18,B4)	
5	=VLOOKUP(B5,Sheet1!\$A\$2:\$B\$9,2)	LI	=COUNTIF(\$C\$9:\$C\$18,B5)	
6	=VLOOKUP(B6,Sheet1!\$A\$2:\$B\$9,2)	W	=COUNTIF(\$C\$9:\$C\$18,B6)	
7				
8	Arrival time	Minutes late	Arrival code	Late Y/N
9	11:03	0	E	=IF(B9>0,"Y","N")
10	11:05	4	LO	=IF(B10>0,"Y","N")
11	11:07	-4	W	=IF(B11>0,"Y","N")
12	11:10	13	LO	=IF(B12>0,"Y","N")
13	11:12	6	S	=IF(B13>0,"Y","N")
14	11:14	-2	LI	=IF(B14>0,"Y","N")
15	11:16	0	W	=IF(B15>0,"Y","N")
16	11:19	-3	LO	=IF(B16>0,"Y","N")
17	11:22	0	LI	=IF(B17>0,"Y","N")
18	11:25	6	E	=IF(B18>0,"Y","N")

Sheet 2



# Information & Communication Technology (ICT-0417)

---

(a) Explain what the function in cell A2 in Sheet 2 does.

.....  
.....  
.....  
.....  
.....  
..... [3]

(b) What station would you expect to see in cell A3 in Sheet 2?

..... [1]

(c) Explain what the function in cell C2 in Sheet 2 does.

.....  
.....  
.....  
.....  
.....  
..... [3]

(d) What value would you expect to see in cell C4 in Sheet 2?

..... [1]

(e) Explain what the function in cell D9 in Sheet 2 does.

.....  
.....  
.....  
.....  
..... [3]

(f) What value would you expect to see in cell D11 in Sheet 2?

(b) What value would you expect to see in cell A6?

..... [1]

(c) Explain what the function in cell G3 does.

.....  
.....  
.....  
..... [2]

(d) Explain what the function in cell H4 does.

.....  
.....  
.....  
.....  
.....  
..... [3]

(e) What value would you expect to see in cell H6?

..... [1]

# Information & Communication Technology (ICT-0417)

May June 2009 (0417/01/M/J/09)

5 Select the most suitable data type from the list to represent:

(a) the number of children in a family .....

(b) a line of a company's address .....

(c) the gender of a person .....

(d) somebody's birthday .....

Alphanumeric

Boolean

Date

Numeric (Integer)

Numeric (Real)

[4]

May June 2009 (0417/01/M/J/09)

10 A book shop owner uses a spreadsheet to calculate profits. This is part of the spreadsheet.

	A	B	C	D	E	F
1	ISBN	Cost price (\$)	Selling Price (\$)	Profit per book (\$)	Number sold	Total Profit (\$)
2	0-34-080006-2	22	29	7	32	224
3	0-52-154540-4	26	35	9	45	405
4	0-74-879116-7	15	21	6	32	192
5	0-34-081639-2	33	41	8	89	712

(a) Which row contains labels?

..... [1]

(b) Give the cell reference of the cell that contains 0-74-879116-7.

..... [1]

## Information & Communication Technology (ICT-0417)

---

(c) Give the cell reference of a cell that contains numeric data.

..... [1]

(d) Write down the formula which has been entered in cell F2.

..... [1]

(e) When the spreadsheet was created a similar formula had to go in cells F3 to F5. Tick **three** methods that could have been used to achieve this, leaving F2 unchanged.

Cut and paste	
Fill down	
Copy and paste	
Dragging the fill handle down	
Transposing the cells	
Absolute cell referencing	

[3]

## Information & Communication Technology (ICT-0417)

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Oct Nov 2009 (0417/01/O/N/09)

- 14 A sports shop owner uses a database to store data about the products he sells. This is part of the database.

Bar code	Brand name	Product type	Number in stock
1825698000040	Kino	Football shirt	22
2266127153625	Dasdida	Hockey boots	15
3756643392895	Brooke	Netball	32
3014232068474	Borem	Rugby shorts	26
5010223708943	Mupe	Running shoes	12

- (a) How many fields are there in this part of the database?

..... [1]

- (b) How many records are there in this part of the database?

..... [1]

- (c) Give the name of the field that is already sorted in order.

..... [1]

- (d) The records shown are to be sorted in ascending order of number in stock. What will be the brand name of the first record in the database after it has been sorted?

..... [1]

- (e) Which field would be the key field?

..... [1]

- (f) Name and describe the most suitable validation check which would be carried out on the Number in stock field.

Name .....

Description .....

.....

.....

..... [3]

## Information & Communication Technology (ICT-0417)

---

May June 2010 (0417/11/M/J/10)

- 11 A school library has a file for storing details of the books it has and a file for storing details of its borrowers. The two files are linked using a common field.

Book File

Code	Title	Author	Published	Number in stock	Cost
1857028898	The Code Book	Simon Singh	1999	2	£10.99
0747591054	The Deathly Hallows	J K Rowling	2007	8	£17.99
0748791167	Sepulchre	Kate Mosse	2007	3	£18.99
0563371218	Full Circle	Michael Palin	1997	1	£19.99

Years 10 and 11 Borrower File

Number	Name	Form	Book Borrowed	Due Back
0102	Me Te Loan	11A	1857028898	14/06/2010
1097	Gurvinder Moore	10C	0747591054	12/06/2010
0767	Akhtar Aftab	10B	0748791167	06/06/2010
0611	Graham Reeves	10D	0563371218	08/06/2010

(a) How many records are there in the book file?

..... [1]

(b) How many fields are there in the borrower file?

..... [1]

(c) What type of database do these two files form?

..... [1]

(d) Give **two** reasons why this type of database system is used rather than having two flat files.

1 .....

2 .....

..... [2]

(e) Which field is the primary key in the Book file?

..... [1]

(f) Which field is the foreign key?

..... [1]

(g) Which field has the data type currency?

..... [1]

(h) What data type would be most appropriate for the **Due Back** field?

..... [1]



## Information & Communication Technology (ICT-0417)

---

(i) Name the most appropriate validation check for the **Number in stock** field.

..... [1]

(j) Name the most appropriate validation check for the **Form** field.

..... [1]

May June 2010 (0417/13/M/J/10)

11 A DVD shop owner wants to use a spreadsheet to calculate his profits. This is part of a spreadsheet he could use.

	A	B	C	D	E	F
1	DVD title	Cost price	Selling Price	Profit per DVD	Number in stock	Total profit per title
2	Alice in Wonderland	\$21	\$24	\$3	12	
3	Toy Story 2	\$18	\$24	\$6	14	
4	How to train your dragon	\$15	\$20	\$5	10	
5	Alpha and Omega	\$22	\$31	\$9	5	
6						
7					Total profit of the four titles	

(a) Give the cell reference of the cell that contains \$18.

..... [1]

(b) Give the cell reference of a cell that contains a label.

..... [1]

## Information & Communication Technology (ICT-0417)

---

(c) Write down the formula that has been used to calculate the value in cell D4.

..... [1]

(d) The **Total profit per title** is calculated by multiplying the **Profit per DVD** by the **Number in stock**. Write down the formula that should go in cell F2.

..... [1]

(e) The owner wants to enter a similar formula to calculate the **Total profit per title** in cells F3 to F5. Write down the name of the technique he could use to do this.

..... [1]

(f) How many columns are shown in the spreadsheet?

..... [1]

(g) The owner wants to find out his total profit for these four titles using a formula. Write down the formula he should use.

..... [1]

(h) Give the reference of the most appropriate cell to insert this formula.

..... [1]

(i) If the owner changes the **Selling price** of Alice in Wonderland to \$28 which other **three** cells would now change as a result?

..... [3]

# Information & Communication Technology (ICT-0417)

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Oct Nov 2010 (0417/11/O/N/10)

- 6 A school has a database which includes details of every student. Tick whether the following statements refer to a file, a field or a record.

	Field	File	Record
All the information about one student.			
One piece of information about each student.			
A primary key.			
All the information about all the students.			

[4]

Oct Nov 2010 (0417/11/O/N/10)

- 10 Write down the most suitable data type for each item of data in the table below.

Registration number	Day/Month/Year of manufacture	Doors	Air conditioning (Y/N)
KAC 758F	12/10/1991	4	Y
KAR 815P	03/06/2005	5	N
KAB 179A	05/08/1990	5	N
KAP 613Y	11/08/2004	3	N

Registration number .....  
 Day/Month/Year of manufacture .....  
 Doors .....  
 Air conditioning .....

[4]

# Information & Communication Technology (ICT-0417)

Oct Nov 2010 (0417/12/O/N/10)

- 9 The manager of a supermarket uses a database to store data about the food he sells. This is part of the database.

Food type	Number in stock	Re-order (Y/N)	Last order received
Potato flakes	123	N	23/10/10
Chocolate bar	158	N	25/10/10
Beefburgers	135	N	24/10/10
Gravy	89	Y	17/10/10

Write down the name of the field which is best suited to the data type given.

- Boolean .....  
Date .....  
Alphanumeric .....  
Numeric .....

[4]

Oct Nov 2010 (0417/13/O/N/10)

- 7 Give **three** features of a relational database that are not found in a flat file database.

- 1 .....  
.....  
2 .....  
.....  
3 .....  
..... [3]

# Information & Communication Technology (ICT-0417)

---

Oct Nov 2010 (0417/13/O/N/10)

- 9 The manager of a bookshop uses a database to store data about the books she sells. This is part of the database.

Title of book	Fiction	Number in stock	Next order due
Full Circle	N	15	20/11/10
Sanditon	Y	15	18/11/10
Vanity Fair	Y	20	16/12/10
The Old Curiosity Shop	Y	10	23/11/10

Using the data above **only**, write down one item of data for each data type below.

- (a) Boolean .....  
(b) Alphanumeric .....  
(c) Date .....  
(d) Numeric .....

[4]

## Chapter # 6

May June 2013 (0417/11/M/J/13)

- 17 The head teacher of a school is concerned that students may be hacking into the exam scores database to change their marks.

Other than passwords, describe ICT methods that could be used to prevent this from happening.

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

May June 2013 (0417/11/M/J/13)

18 Discuss the use of blogs and social networking sites as means of communication.

.....

.....

.....

.....

.....

.....

.....

.....

.....

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.....

.....

[6]

May June 2013 (0417/12/M/J/13)

5 Microprocessors are used in different applications to control the process or to simply gather data (measurement only).

Tick which of the following applications are examples of control or of measurement only.

	Control	Measurement only
Automatic cookers		
Weather stations		
Microwave ovens		
Automatic washing machines		

[4]

# Information & Communication Technology (ICT-0417)

May June 2013 (0417/13/M/J/13)

10 Describe what is meant by a blog.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4]

May June 2013 (0417/13/M/J/13)

1 A head teacher has decided that the school magazine will now be included in the school's website.

(a) Tick **three** features of a website which would not be found in a magazine printed on paper.

	<input checked="" type="checkbox"/>
Hyperlinks	<input type="checkbox"/>
Colour	<input type="checkbox"/>
Large font size	<input type="checkbox"/>
Photos	<input type="checkbox"/>
Sound	<input type="checkbox"/>
Video	<input type="checkbox"/>

[3]



May June 2013 (0417/13/M/J/13)

(b) Give **three** other reasons why the head teacher thinks it is a good idea to replace the paper version with a website version.

1 .....

.....

2 .....

.....

3 .....

..... [3]

May June 2013 (0417/13/M/J/13)

**10** Describe what is meant by a blog.

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

May June 2013 (0417/13/M/J/13)

12 A house has a microprocessor controlled central heating system.

(a) Describe the use of the following input devices in such a system.

Keypad .....

.....

Sensor .....

..... [2]

(b) Describe how the microprocessor would use the data from these devices to control the system.

.....

.....

.....

.....

.....

.....

.....

..... [4]

## Information & Communication Technology (ICT-0417)

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Oct Nov 2013 (0417/11/O/N/13)

3 Tick **True** or **False** next to each of these statements.

	True	False
Withdrawing money from an ATM is an example of batch processing.		
The processing of bank cheques is an example of batch processing.		
Booking a theatre ticket is an example of online processing.		
Producing utility bills is an example of online processing.		

[4]

Oct Nov 2013 (0417/11/O/N/13)

8 Tick **spam** or **pharming**, next to each statement, as appropriate.

	spam	pharming
is the sending of several emails at once		
requires malicious code to be downloaded		
re-directs the user to a fake website		
is the sending of unsolicited messages		

[4]

Oct Nov 2013 (0417/11/O/N/13)

16 Describe what is meant by a Wiki.

.....  
.....  
.....  
.....  
.....  
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.....  
.....  
..... [4]

Oct Nov 2013 (0417/11/O/N/13)

17 There are a number of health and safety risks associated with using computers.

For the **three** safety risks given below, describe a way in which each can be minimised.

Electrocution .....

.....

Fire .....

.....

Tripping .....

..... [3]

Oct Nov 2013 (0417/11/O/N/13)

**18** There are many microprocessor-controlled devices in the modern home.

Describe **five** effects of these devices on people's lifestyles.

- 1 .....
  - .....
  - 2 .....
  - .....
  - 3 .....
  - .....
  - 4 .....
  - .....
  - 5 .....
  - .....
- [5]

Oct Nov 2013 (0417/12/O/N/13)

**6** Describe **three** features of a social network site.

- 1 .....
  - .....
  - 2 .....
  - .....
  - 3 .....
  - .....
- [3]

# Information & Communication Technology (ICT-0417)

Oct Nov 2013 (0417/12/O/N/13)

10 There are many safety issues associated with the use of computers.

Tick **three** of these issues.

	✓
Back ache from bad posture	
Electrocution from touching bare wires	
Fire from overloading electric sockets	
Headaches from staring at the screen continuously	
Injury caused by tripping over trailing wires	
RSI in the fingers	

[3]

. Oct Nov 2013 (0417/12/O/N/13)

11 A greenhouse is controlled by a computer.

(a) Other than a temperature sensor name **two** sensors used in the greenhouse.

- 1 .....
- 2 ..... [2]

(b) Explain why computers are unable to read the data directly from these sensors.

.....

.....

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..... [2]

Oct Nov 2013 (0417/12/O/N/13)

15 Explain the differences between phishing and pharming.

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[4]

## Information & Communication Technology (ICT-0417)

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Oct Nov 2013 (0417/12/O/N/13)

- 17 Describe some of the benefits and drawbacks of students using the Internet to do research for homework.

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..... [7]



# Information & Communication Technology (ICT-0417)

---

Oct Nov 2013 (0417/13/O/N/13)

8 There are many health risks associated with the use of computers.

Tick **three** of these risks.

	✓
Electrocution from touching bare wires	
Fire from overheating of equipment	
Fire from overloading of sockets	
Neck pain due to bad positioning of the screen	
RSI due to continuous typing	
Sight problems from staring at the screen continuously	

[3]

Oct Nov 2013 (0417/13/O/N/13)

9 (a) Describe what is meant by hacking, including ways that a hacker can misuse data held on a computer.

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[4]

# Information & Communication Technology (ICT-0417)

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Oct Nov 2013 (0417/13/O/N/13)

- 11 Explain why information found on websites is not always reliable and describe how the reliability of the information can be evaluated.

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[5]

Oct Nov 2013 (0417/13/O/N/13)

- 14 Describe what phishing is and explain its purpose.

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.....  
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.....

[4]

**Chapter # 7**

May June 2013 (0417/11/M/J/13)

- 10 (a) Describe batch processing of data, using the processing of bank cheques as an example.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
..... [4]

- (b) Explain why the booking of airline tickets using batch processing would not be a good idea.

.....  
.....  
.....  
.....  
.....  
..... [3]

# Information & Communication Technology (ICT-0417)

---

May June 2013 (0417/11/M/J/13)

**11** Robots are now used on many car production lines.

Tick **four** ways that their use has affected workers in the car industry.

	✓
More technical staff have been employed	
Car workers can have more breaks	
Car workers have to lift all the heavy parts	
Car workers get paid less	
Car workers have been made unemployed	
Car workers have had to be retrained	
Work areas are dirtier	
There are fewer manual tasks to do	

[4]

May June 2013 (0417/12/M/J/13)

**9** Robots are now used on many car production lines.

Describe **three** advantages of this to a car company.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

May June 2009 (0417/01/M/J/09)

6 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ mm forward
BACKWARD $n$	Move $n$ mm backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen

Complete the set of instructions to draw this shape by filling in the blank lines.

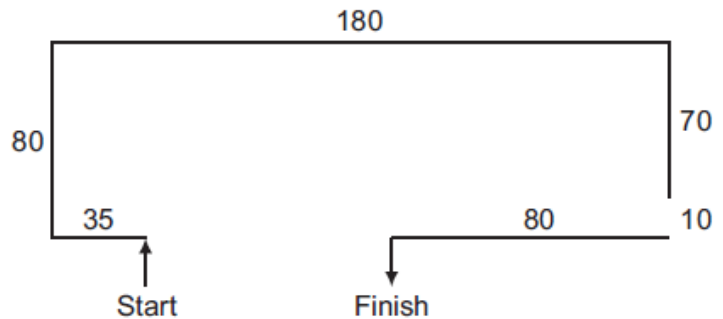
PEN DOWN

LEFT 90

FORWARD 35

RIGHT 90

.....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....

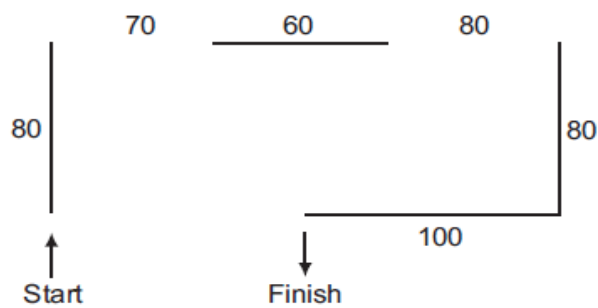


[5]

May June 2010

7 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ mm forward
BACKWARD $n$	Move $n$ mm backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen



Complete the set of instructions to draw this shape by filling in the blank lines.

PEN DOWN

FORWARD 80

RIGHT 90

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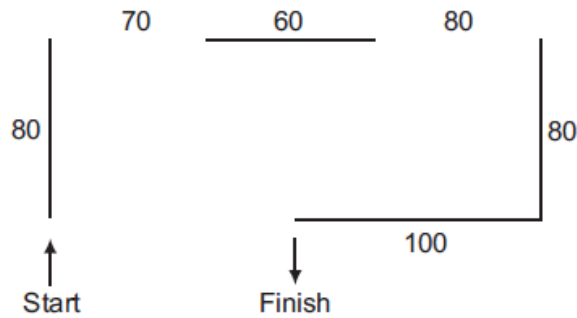
.....

# Information & Communication Technology (ICT-0417)

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7 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ mm forward
BACKWARD $n$	Move $n$ mm backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen



Complete the set of instructions to draw this shape by filling in the blank lines.

PEN DOWN

FORWARD 80

RIGHT 90

.....

.....

.....

.....

.....

.....

.....

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.....

.....

.....

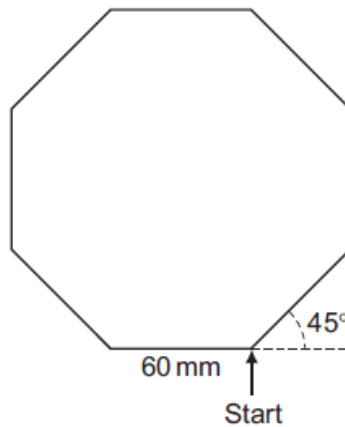
.....

)

May June 2010 (0417/13/M/J/10)

7 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ mm forward
BACKWARD $n$	Move $n$ mm backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen
REPEAT $n$	Repeat the following instructions $n$ times
END REPEAT	Finish the REPEAT loop



Complete the set of instructions to draw this shape by filling in the blank lines.

```

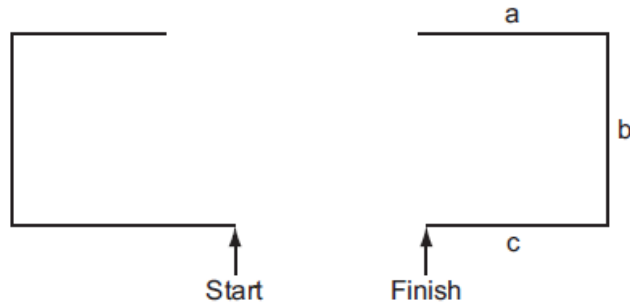
PEN DOWN
..... 90
REPEAT .....
FORWARD .....
..... 45
.....
    
```

[5]



Oct Nov 2013 (0417/11/O/N/13)

9 A student wishes to use a floor turtle to draw this shape:



Name and explain the meaning of **four** instructions that the turtle graphics software would contain in order to draw the shape. Note: a, b and c are the same length.

Instruction 1 .....

Meaning .....

Instruction 2 .....

Meaning .....

Instruction 3 .....

Meaning .....

Instruction 4 .....

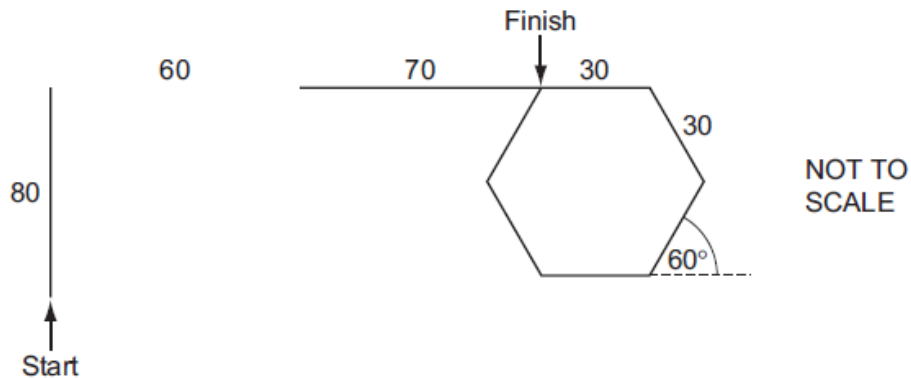
Meaning .....

..... [8]

Oct Nov 2013 (0417/12/O/N/13)

7 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ mm forward
BACKWARD $n$	Move $n$ mm backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen
REPEAT $n$	Repeat the following instructions $n$ times
END REPEAT	Finish the REPEAT loop



Complete the set of instructions to draw this shape by filling in the blank lines provided. Do not use additional lines.

PENDOWN

FORWARD 70

FORWARD 80

.....  
 .....  
 .....  
 .....

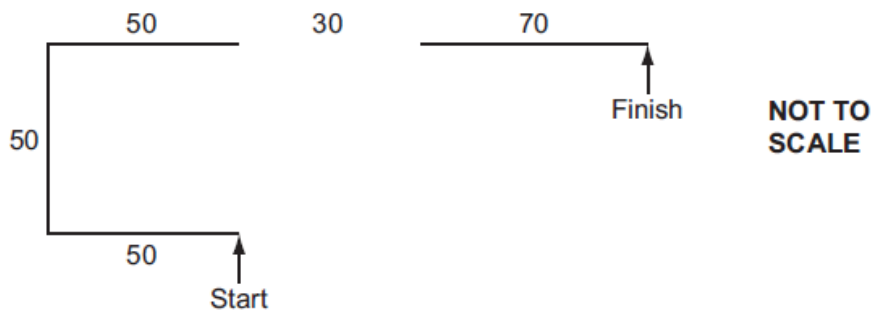
.....  
 .....  
 .....

[8]

Oct Nov 2013 (0417/13/O/N/13)

6 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ mm forward
BACKWARD $n$	Move $n$ mm backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen
REPEAT $n$	Repeat the following instructions $n$ times
END REPEAT	Finish the REPEAT loop



Complete the set of instructions to draw this shape by filling in the blank lines. Do **not** use additional lines.

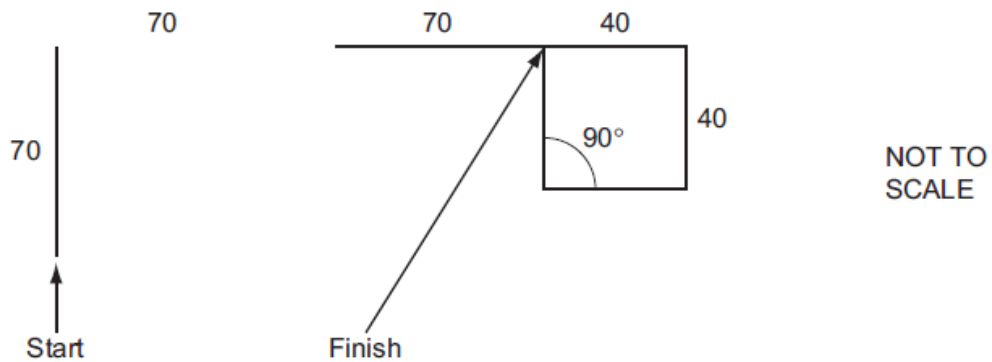
PENDOWN		
LEFT	90	
FORWARD	50	
REPEAT	.....	

[8]

Oct Nov 2012 (0417/11/O/N/12)

9 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ forward
BACKWARD $n$	Move $n$ backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen
REPEAT $n$	Repeat the following instructions $n$ times
END REPEAT	Finish the REPEAT loop



Complete the set of instructions to draw this shape by filling in the blank lines.

PENDOWN .....

FORWARD 70 .....

RIGHT 90 .....

.....

.....

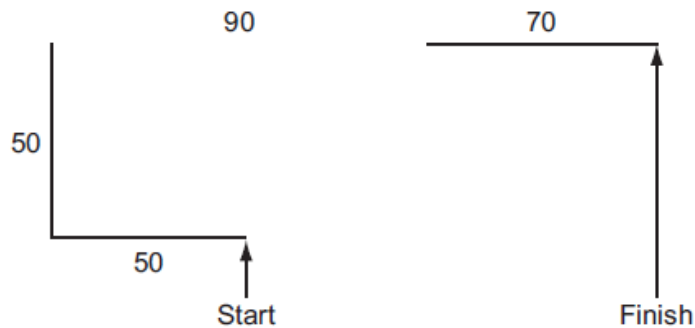
.....

[8]

Oct Nov 2012 (0417/12/O/N/12)

7 A floor turtle can use the following instructions:

INSTRUCTION	MEANING
FORWARD $n$	Move $n$ forward
BACKWARD $n$	Move $n$ backward
LEFT $t$	Turn left $t$ degrees
RIGHT $t$	Turn right $t$ degrees
PENUP	Lift the pen
PENDOWN	Lower the pen
REPEAT $n$	Repeat the following instructions $n$ times
END REPEAT	Finish the REPEAT loop



Complete the set of instructions to draw this shape by filling in the blank lines.

```

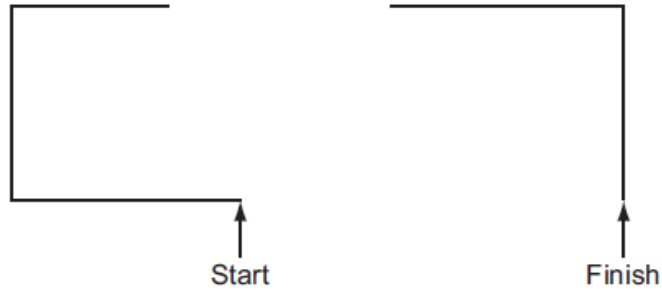
PENDOWN .....
LEFT      90 .....
REPEAT    .....
.....
.....
    
```

[8]

Oct Nov 2012 (0417/13/O/N/12)

7 A student wishes to use floor turtle to draw this shape:

Name and explain the meaning of **four** instructions that the turtle graphics software would need to contain in order to draw the shape. No two lines are the same length.



Instruction 1 .....

Meaning .....

Instruction 2 .....

Meaning .....

Instruction 3 .....

Meaning .....

Instruction 4 .....

Meaning .....

..... [8]

# Information & Communication Technology (ICT-0417)

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May June 2013 (0417/12/M/J/13)

**10 (a)** Car mechanics often use expert systems to help them to diagnose faults with car engines.

Tick **four** components of a typical expert system.

	✓
Graph plotter	
Inference engine	
Interactive input screen	
Knowledge base	
Rules base	
Scanner	
Spreadsheet	
Web cam	

[4]

**(b)** Name **two** other applications which involve the use of expert systems.

1 .....

.....

2 .....

.....

[2]

May June 2013 (0417/13/M/J/13)

- 11 Car mechanics often use an expert system to help them with their work in diagnosing car engine faults.

Describe how this system would work.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]





## Chapter # 8

May June 2009 (0417/01/M/J/09)

- 11 Raquel Lopez owns a chain of car repair garages. She keeps records of all her customers. She has employed a systems analyst to recommend a new computer system for her business. The first task the analyst will undertake is to analyse the existing system.

(a) Give **four** methods of analysing the existing system.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

..... [4]

(b) Details of each customer need to be entered into the computer. Give **one** reason why this data will need to be verified.

.....

..... [1]

(c) Name and describe **one** method of verification.

.....

.....

.....

..... [2]

(d) The systems analyst decides that the system needs to have a screen input form to enter all the details of each customer. Name **four** data items that would be included in such a form.

- 1 .....
- 2 .....
- 3 .....
- 4 ..... [4]

(e) Describe **four** features that would help a user to navigate between input forms.

- 1 .....
- .....
- 2 .....
- .....
- 3 .....
- .....
- 4 .....
- ..... [4]

(f) The systems analyst now designs the file structure. Tick **three** items which would need to be designed as part of the file structure.

Field names	<input type="checkbox"/>
Input screen	<input type="checkbox"/>
Print format	<input type="checkbox"/>
Validation routines	<input type="checkbox"/>
Field lengths	<input type="checkbox"/>
Hardware and software required	<input type="checkbox"/>

[3]

## Information & Communication Technology (ICT-0417)

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(g) Name **three** methods of implementing this new system.

- 1 .....
- 2 .....
- 3 ..... [3]

(h) After the system is implemented it will be evaluated. Tick **three** items which should be present in the evaluation.

Printouts of the results of queries	
The appropriateness of the solution	
Comparing the solution with the original task requirements	
Program listing	
Any improvements which can be made to the system	
System flowcharts	

[3]

May June 2010 (0417/11/M/J/10)

14 Joan owns a small company. She wishes to replace the existing computerised system with a new one. She has employed a systems analyst, Jasvir, to plan this.

(a) Before Jasvir decides on a system he must collect information about the existing system. Tick whether the following statements about the various methods of information collection are **TRUE** or **FALSE**.

	TRUE	FALSE
Examining documents has to be done in the presence of all the workers		
Appointments have to be made with a worker in order to complete a questionnaire		
It is possible to change questions in the course of an interview		
Observing the current system can provide a detailed view of the workings of the system		

[4]

## Information & Communication Technology (ICT-0417)

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- (b) After Jasvir has completed the analysis of the existing system, he will need to design the new system. Tick **four** items which would need to be designed.

	✓
Inputs to the current system	
User and information requirements	
Data capture forms	
Validation routines	
Problems with the current system	
File structure	
Report layouts	
Limitations of the system	

[4]

May June 2010 (0417/11/M/J/10)

- 15 After a system is designed it will be implemented. Give **one** advantage of each of the following methods of implementation.

Direct changeover .....

.....

Parallel running .....

.....

Phased implementation .....

.....

[3]

# Information & Communication Technology (ICT-0417)

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May June 2010 (0417/11/M/J/10)

- 16 After a system has been implemented it needs to be evaluated. Identify **two** evaluation strategies and state a reason why each is needed.

Strategy 1 .....

.....

Reason 1 .....

.....

Strategy 2 .....

.....

Reason 2 .....

.....

[4]

May June 2010 (0417/13/M/J/10)

- 14 Peter owns a small company. He wishes to replace the existing computerised system with a new one. He has employed a systems analyst, Sarbjit, to plan this.

- (a) Sarbjit wishes to collect information about the existing system using a variety of methods. Tick **TRUE** or **FALSE** to indicate whether the following statements give appropriate reasons why the method would be used.

	TRUE	FALSE
Examining documents helps to identify the inputs and outputs of the system		
A questionnaire makes the workers feel good		
An interviewer can ask questions based on the previous response		
Observing the current system helps to identify any problems with the system		

[4]

## Information & Communication Technology (ICT-0417)

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- (b) Sarbjit will need to design the file structure of the new system. Tick **four** items which would need to be included in this design.

	<input checked="" type="checkbox"/>
Field names	<input type="checkbox"/>
Screen layout	<input type="checkbox"/>
Field types	<input type="checkbox"/>
Key field	<input type="checkbox"/>
Field lengths	<input type="checkbox"/>
User needs	<input type="checkbox"/>
System specification	<input type="checkbox"/>
Input forms	<input type="checkbox"/>

[4]

May June 2010 (0417/13/M/J/10)

- 15 After a system is designed it will be implemented. For each of the following situations, write down the most appropriate method of implementation.

(a) A small company with very little money to spare

.....

(b) A company where the most important consideration is not to interrupt production

.....

(c) A company which only wants a small scale implementation to begin with

..... [3]

# Information & Communication Technology (ICT-0417)

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May June 2010 (0417/13/M/J/10)

- 16 After a system has been implemented it needs to be tested. Describe **two** testing strategies and state a reason why each is needed.

Strategy 1 .....

.....

Reason 1 .....

.....

Strategy 2 .....

.....

Reason 2 .....

..... [4]

May June 2011 (0417/11/M/J/11)

- 4 Tick whether each of the following is a method of validation or verification.

	Validation	Verification
A computer comparing two versions of the data		
Using check digits		
Applying a length check		
Performing a range check		
Typing in data twice		
Visually comparing data on screen with the original data source		

[6]



# Information & Communication Technology (ICT-0417)

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May June 2011 (0417/11/M/J/11)

17 A systems analyst has been asked by a school librarian to update the computer system she uses to keep records about her books.

(a) The systems analyst must first of all collect information about the existing system. Describe **three** methods which could be used to collect this information.

1 .....

.....

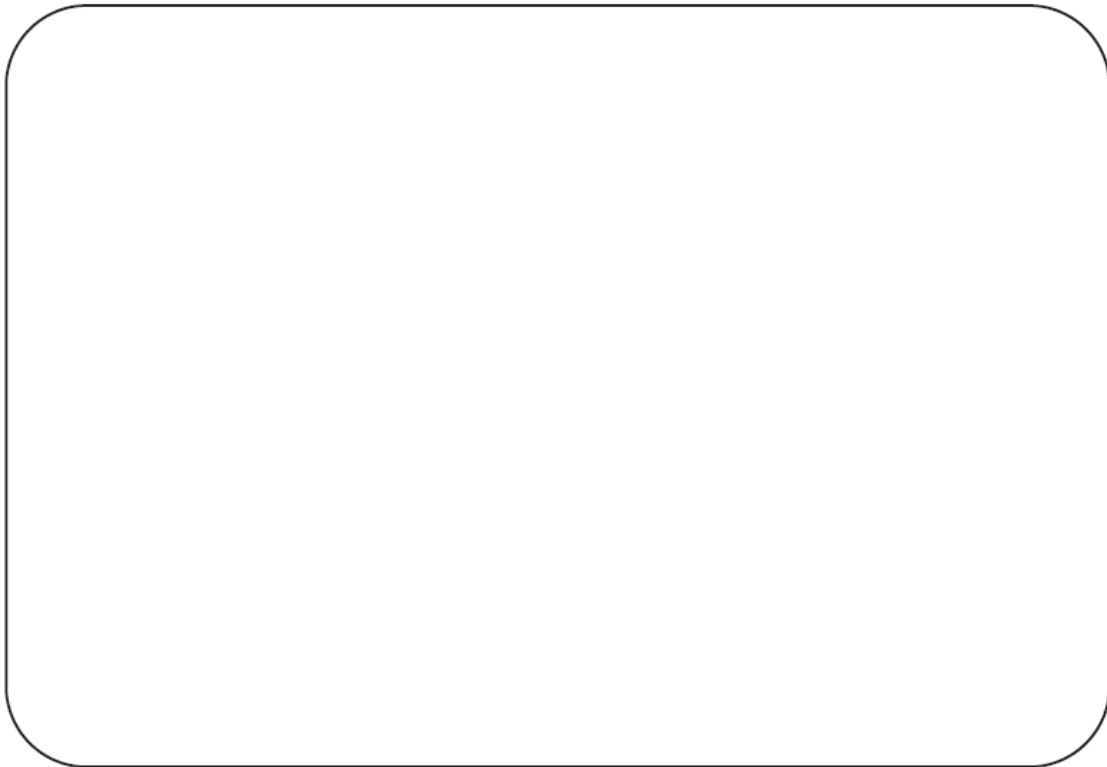
2 .....

.....

3 .....

..... [3]

(b) The systems analyst must now produce a screen input form which the librarian could use for typing in each book's details. Design a suitable screen input form to enter the details of **one** book. It should contain appropriate spacing for each field, as well as navigation aids.



[5]

# Information & Communication Technology (ICT-0417)

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May June 2011 (0417/11/M/J/11)

**18** A new computer system storing examination results out of 100 is to be tested using a range of test data. For each item of test data below, name the type of test data used, explaining your choice. Use each type once only.

(a) 65 .....  
.....  
.....  
..... [2]

(b) 100 .....  
.....  
.....  
..... [2]

(c) 121 .....  
.....  
.....  
..... [2]

# Information & Communication Technology (ICT-0417)

---

May June 2011 (0417/11/M/J/11)

- 19** When a new system is implemented, documentation is provided with it. Identify the **two** different types of documentation produced and name **two** different components in each.

Type 1 .....

Component 1 .....

.....

Component 2 .....

.....

Type 2 .....

Component 1 .....

.....

Component 2 .....

..... [6]

# Information & Communication Technology (ICT-0417)

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May June 2011 (0417/12/M/J/11)

- 10 The manager of a supermarket uses a database to store data about the food he sells. This is part of the database.

Food type	Number in stock	Re-order (Y/N)	Last order received
Potato flakes	123	N	23/10/10
Chocolate bar	158	N	25/10/10
Beefburgers	135	N	24/10/10
Gravy	89	Y	17/10/10

For each of the following fields describe an appropriate validation check. You must describe three different validation checks.

(a) Number in stock .....

.....

.....

(b) Re-order (Y/N) .....

.....

.....

(c) Last order received .....

.....

..... [6]

# Information & Communication Technology (ICT-0417)

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May June 2011 (0417/12/M/J/11)

- 15 Joseph wants to type in details of new customers into a database. He needs to design an on-screen input form.

Describe **four** navigation aids that would be part of a well designed on-screen input form.

1 ..... [1]

2 ..... [1]

3 ..... [1]

4 ..... [1]

May June 2011 (0417/12/M/J/11)

- 16 A company is developing a new computer system. After the new system is developed, it will be implemented.

(a) Name **two** methods of implementation. Give **one** advantage and **one** disadvantage of each.

Method 1 .....

Advantage .....

Disadvantage .....

.....  
Method 2 .....

Advantage .....

.....  
Disadvantage .....

..... [6]

(b) After the system is implemented it will be evaluated. Identify three activities which would need to be carried out in evaluating the system.

1 .....

.....

2 .....

.....

3 .....

..... [3]

# Information & Communication Technology (ICT-0417)

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May June 2011 (0417/13/M/J/11)

- 15 Eric wants to type in details of new customers into a database. He needs to design an on-screen input form.

Describe **four** features, apart from navigational aids, of a well-designed on-screen input form.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

..... [4]

May June 2011 (0417/13/M/J/11)

- 16 After a system has been implemented it needs to be tested. Describe two testing strategies and state a reason why each is needed.

(a) Strategy 1 .....

.....

Reason 1 .....

..... [2]

(b) Strategy 2 .....

.....

Reason 2 .....

..... [2]

# Information & Communication Technology (ICT-0417)

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May June 2012 (0417/11/M/J/12)

- 4 A test is marked out of 20 and recorded as an integer. Tick whether each of the following marks is an example of **abnormal** data or **extreme** data.

	Abnormal	Extreme
20		
21		
twenty		
0		

[4]

May June 2012 (0417/11/M/J/12)

- 12 Name and describe **three** validation checks which could be carried out on a 16-digit credit card number when it is typed into a computer.

Name .....

Description .....

.....

Name .....

Description .....

.....

Name .....

Description .....

.....

[6]



# Information & Communication Technology (ICT-0417)

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May June 2012 (0417/11/M/J/12)

**15** Gita has employed Johann, a systems analyst, to create a new database system for her car sales business. She only sells cars made by Rock and only the models Feisty, Mendo and Galactica in red, blue or gold. Most of the cars have air conditioning but some do not. She sells 3, 4 and 5 door cars.

(a) Give a reason why would it not be sensible to have a Make field in the database.

.....  
..... [1]

(b) Complete the design table below giving the field names which would be used in the database and describing the most appropriate validation check which could be carried out on each field.

Field name	Validation check
Model	

[7]



# Information & Communication Technology (ICT-0417)

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May June 2012 (0417/12/M/J/12)

- 13 Ahmed has asked Anna, a systems analyst, to create a new database system for his video rental business. He rents out films in DVD and blu-ray formats only. Here are some of the questions that customers ask:

Have you got the film 'The King's Speech' in blu-ray format?

Have you any films which are shorter than 2 hours?

Have you any Harry Potter films released since 2005?

- (a) Complete the design table below filling in the field names and data types using the **most** appropriate data type to create a database which would answer these questions.

Field name	Data type
	Text
	Date

[6]

- (b) Part of the design process is setting an appropriate field length for each field. Explain why this is so important.

.....

.....

.....

.....

[2]

## Information & Communication Technology (ICT-0417)

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- (c) Anna will provide two types of documentation when the system is implemented. Name each type of documentation and for each one give **two** items which would be included.

Name .....

Item 1 .....

Item 2 .....

Name .....

Item 1 .....

Item 2 .....

..... [6]



# Information & Communication Technology (ICT-0417)

May June 2012 (0417/13/M/J/12)

- 13 A teacher has developed a new system for keeping a record of student examination marks on her laptop and wishes to test it. Each examination is marked out of 50. Identify **three** types of test data she could use and describe each type using an example.

Type 1 .....

Description .....

Type 2 .....

Description .....

Type 3 .....

Description .....

[6]

May June 2013 (0417/11/M/J/13)

- 13 Li has asked Sharon, a systems analyst, to create a new database system for his computer store. He only sells computers made by ZIKO. Here are some of the questions customers ask:

“Have you got a computer with a hard disc which stores more than 1000 Gigabytes?”

“Have you got a laptop which has a separate number pad?”

“Have you got a PC which costs less than \$500?”

- (a) Complete the data dictionary below filling in the field names and the **most appropriate** data types to create a database which would answer these questions.

Field name	Data type
	Integer
Separate_Number_Pad	

[6]



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May June 2013 (0417/11/M/J/13)

- 16 Iqbal wants to test the new computerised payroll system he would like to introduce to his company. No company worker is paid less than \$100 and no worker is paid more than \$500.

Explain what is meant by the following three types of test data using examples of the wages paid to workers.

Normal .....

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Abnormal .....

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Extreme .....

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[6]



# Information & Communication Technology (ICT-0417)

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May June 2013 (0417/12/M/J/13)

**12** A company wishes to replace its current system with a new computerised system. It has employed a systems analyst to investigate the current system.

**(a)** Describe **three** methods the systems analyst could use to research the current system.

1 .....

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2 .....

.....

3 .....

..... [3]

## Information & Communication Technology (ICT-0417)

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When large volumes of data are input to a new system it is usual to carry out verification and validation on this data.

(b) Name and describe **two** methods of verification which could be used.

Name .....

Description .....

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Name .....

Description .....

..... [4]

(c) Explain why it is necessary to carry out validation even though the data has been verified.

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..... [3]

## Information & Communication Technology (ICT-0417)

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May June 2013 (0417/12/M/J/13)

15 Chi has employed Sarbjit, a systems analyst, to create a new database system for his mobile telephone (cellphone) business.

- He keeps a number of different models in stock.
- Most of the phones have a camera but some do not.
- The rental plans have 100, 200 or 500 free texts depending on the amount the customer pays per month.
- The minimum monthly payment is \$10 and the maximum is \$100.

(a) Complete the data dictionary below filling in the field names and the **most appropriate** data types to create a database using only the above information.

Field name	Data type
Model	
Monthly payment	

[6]

(b) Name and describe **three** different validation checks that could be used on the data in this database.

1 .....

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2 .....

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3 .....

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[6]

## **Practical's**