

# Candidate Style Answers

OCR GCSE ICT J461 / J061

Unit B061 ICT in today's world: Examined Assessment

High-Grade Candidate Response

This support material booklet is designed to accompany the OCR GCSE ICT specifications for teaching from September 2010.

# Introduction

OCR has produced these candidate style answers to support teachers in interpreting the assessment criteria for the new GCSE specifications and to bridge the gap between new specification release and availability of exemplar candidate work.

This content has been produced by subject experts, with the input of Chairs of Examiners, to illustrate how the sample assessment questions might be answered and provide some commentary on what factors contribute to an overall grading. The candidate style answers are not written in a way that is intended to replicate student work but to demonstrate what a “good” or “excellent” response might include, supported by examiner commentary and conclusions.

**As these responses have not been through full moderation and do not replicate student work, they have not been graded and are instead, banded “middle” or “high” to give an indication of the level of each response.**

Please note that this resource is provided for advice and guidance only and does not in any way constitute an indication of grade boundaries or endorsed answers.

## Candidate Response

---

### Q.1

Tick **one** box in each row to show whether the component is input, output or storage.

Component	Input (✓)	Output (✓)	Storage (✓)
camera	✓		
ear phone		✓	
flash memory card			✓
keypad	✓		
microphone	✓		
speaker		✓	

### Q.2

The correct technical term for the pictures is “icons”.

### Q.3

In the table below, write down the letter for each of the labelled items. The first one has been done for you.

Item	Letter
email address	B
address of the page being shown	A
hyperlink to another webpage	D
plain text	C

### Q.4 (a)

Julian would open his email application and write his message. He would use his address book or a distribution list to put in the email addresses of his student, attach the report and send the email.

### (b)

#### Advantage 1

Email can be used to send messages to many people at once without having to rewrite the message or make multiple printouts. Emails can have multimedia files attached so there is no need to send CDs or DVDs in the post where they might be broken in transit.

#### Advantage 2

The recipient will get an electronic copy of the message which can be edited or forwarded without having to copy or reprint it.

**Q. 5** A computer virus is a program that can copy itself and which deletes or damages the files stored on a computer system. Viruses can also affect the performance of the system by taking up resources such as hard disk space and CPU time.

**Q. 6 (a)** Sensors send analogue data which must be converted into digital data so that the computer can read it. The interface box will act as an analogue to digital converter to do this but it will also protect the input circuits of the computer from any electrical problems that might arise when the sensors are being used.

**(b)** Using computer systems to monitor the water will require electrical power or batteries, both of which are difficult to use or rely on when outside. If the power fails then no new readings will be taken and any data already captured may be lost.

**(c)** The data from the sensors can be used in two ways. It could be used by the computer system to control the temperature of the pool if the computer system is also connected to the heating system. The computer system will turn the heaters on or off depending on the temperature of the pool to keep the pool at the correct temperature for swimming. The data could also be used to create reports on the conditions in the pool by exporting it to a spreadsheet and making charts. The charts, with titles and legends, would be copied and pasted into reports made in a word processor and shown to the owners.

**(d) Sensor:**

A light sensor.

Use of sensor:

The robot will use the sensor to detect when the amount of light reaching the bottom and being reflected back is below a set level. This would mean that the pool is dirty and the robot will start to clean the bottom of the pool.

**Q.7 (a)** He could formulas to calculate the total of his trip so that when he can change some of the costs and see how the total changes.

**(b)** The model could be based on predictions of how future currency rates will change using trends over the past few years.

**(c)** Using computer models to predict exchange rates will need a very complex model that may not run on an ordinary computer system and may take too long to produce any results. If the model is not complex enough the predictions from the model will not be accurate enough to be used.

The model may be complex to set up and will require the use of functions and formulas as well some custom-made macros and codings which will require specialist programmers to create. Computer models are never perfect and small errors in the rules, variables, data or programming may cause the predictions to be so inaccurate as to be useless but the user cannot know this at the time so computer models need to be used with caution.

Computer models are only simulations and do not state what will actually happen because they will not include all that, or enough of what, happens in real life to make the predictions completely accurate.

**Q. 8** The internet has become a useful tool for shopping and for selling your goods. There is a much greater choice of places to buy from and goods to buy. People can search for what they want to buy and compare prices from different sellers so they can find the best deal. It does not matter where the shop is based because using the internet allows you to search all over the world. This

means that, although you will have to pay for delivery or postage, often you can find the goods you want much cheaper and you do not have to travel to the shop. This saves you money in fuel, parking or ticket costs. The drawbacks are that you cannot really examine the goods properly from a photograph before you buy them and, when they are delivered they may not be exactly what you wanted. It is impossible to try on clothes before you buy them if you shop for them on the internet but some sellers will let you return them if they do not fit, but you do not know how many others have tried them on before you get them. There are extra costs of post and packaging when buying over the internet and someone must be at home to sign for the goods when they are delivered.

You must a computer connected to internet and some way of paying for the goods as using cash is not possible. A credit or debit card is essential as this will also offer you some protection of the goods do not arrive or the seller is a fraud as you may be able to claim your money back from the bank. Most reliable companies will use a secure website for financial transactions to make sure that the customers' details are kept safe.

If you are selling goods, it means that you do not need to have a shop or employ staff to work in the shop. You will miss out on the personal contact with your customers and will have to have security measures in place to protect the customers' personal details and bank account details. A seller must also comply with the Data Protection Act and this may cost money to ensure that all the rules are followed. However, the seller can reach customers all over the world.

**Q.9** Both WiFi and Bluetooth use radio communications over short ranges. This means that they are both suitable for connecting computer systems within a house or small business but not over large distances. WiFi speeds are much greater than Bluetooth but require more power so Bluetooth is suitable for small portable devices like mobile phones. WiFi uses much higher speeds than Bluetooth and is used for connecting computers to a network. Wifi "hotspots" allow internet access via a router for people who are away from home e.g. in a coffee shop or hotel. Bluetooth is not suitable for this as it too slow and it is not secure because it is unlicensed and anyone can set up a connection.

**Q. 10** Social networking means using a web based or online community to keep in contact with others or to exchange information with others. People can use email, instant messaging, chat rooms, web blogs or Twitter to write down what they are doing or to send messages. "Facebook" is a website that allows people to post information about themselves for others to see and comment upon. Many people use this and other similar web sites and post private information for all to see.

All this social networking should be used with caution because anyone can see the information if it is not kept secure and used for fraud, identity theft, cyber bullying or for blackmail. The information could also be used by people who would harm the person whose details were shown e.g. paedophiles or stalkers.

There are fake sites that are set up to collect data from individuals and people using social network sites must be sure that they know who they are talking to and who they are giving their data to. Users should make sure that they do not give out personal details or where they live or what they are doing as others may use this data to abuse or bully them, use their identity or to break into their homes when they are away.

Even reputable social network sites must be used with caution as many may not be subject to the usual Data Protection laws and do not have to keep any data that is posted there secure from others. They may collect large amounts of information about many people. This information could be used in ways that the original owner did not such as for research purposes or personality profiling. It could also be edited or changed without reference to the original owner.