

# ICT IGCSE Theory – Revision Presentation

## 1.4 Types of computer

- Describe the characteristics of a personal/desktop computer and its uses, both as a standalone and networked computer
- Describe the characteristics of a laptop computer and what it is used for, both as a standalone and networked computer
- Describe the characteristics of a tablet computer and what it is used for, including its ability to use wireless technology or 3G/4G technology
- Describe the computer characteristics of a smartphone and what it is used for in computing terms
- Describe the advantages and disadvantages of each type of computer

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## 1.4 Types of computer

**Describe the characteristics of a personal/desktop computer and its uses, both as a standalone and networked computer**



### Desktop/Personal Computer

- Computers used to be huge and would sometime take up the whole space of a room.
- In the 1980s (desktop/personal) computers were created and were small enough to fit on desks.
- These computers were cheap and affordable for the public.
- Desktop Computer normally have a separate monitor, keyboard, mouse, speakers etc.

#### Standalone

- Can be used as a standalone computer in your home for personal or work use.
- Tends to be connected to own printer and internet connection.

#### Networked

- Share resources
- Share files
- Shared Drives
- Central Storage
- Online Gaming

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**Describe the characteristics of a laptop computer and what it is used for, both as a standalone and networked computer**



### Laptop Computer

- Laptops refers to a computer where all the components (monitor, keyboard etc.) are together on a single device.
- The main advantage of a laptop computer is that it is portable and can connect wirelessly to network connections.

Standalone	Networked
<p><b>Can be used for either personal or work use.</b></p> <ul style="list-style-type: none"> <li>• Completing work</li> <li>• Communication</li> <li>• Gaming</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Connect to Internet</b></li> <li>• Share resources</li> <li>• Share files</li> <li>• Shared Drives</li> <li>• Central Storage</li> <li>• Online Gaming</li> </ul>

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**Describe the characteristics of a tablet computer and what it is used for, including its ability to use wireless technology or 3G/4G technology**



### Tablet Computer

- Tablets are very similar to smart phones.
- They have an internet connection via a wireless connection including 3G/4G.
- Tablets make use of touch screen technology to select options on a menu or to select particular icons.
- Applications can be downloaded and installed.
- Sensors including speech recognition.

Wireless	3G/4G
<p>Tablets are able to connect to any wireless networks.</p> <p>Users are able to use the internet as long as they are in range.</p>	<p>4G is a mobile communications standard intended to replace 3G, allowing wireless Internet access at a much higher speeds.</p> <p>Would allow for internet connection on the move.</p>

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**Describe the computer characteristics of a smartphone and what it is used for in computing terms**



### Smart Phone

- Smart phones can use traditional methods to make phones calls and send messages using mobile network.
- Smart phones have operating systems which allows them to run multiple applications.
- Like the Tablets Computers Smart Phones have many features including:
  - Touch Technology
  - Internet connection (Wireless/3G/4G)
  - Sensors
  - Cameras





### Use

- Send and receive emails
- Browse the internet
- Voice over Internet Protocol (Voip) – voice/video calls.
- Streaming music/video content
- Communication via social networking applications
- Global Positioning System – to help navigate

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Describe the advantages and disadvantages of each type of computer

Type	Advantages	Disadvantages
<b>Desktop/Personal Computer</b> 	<ul style="list-style-type: none"> <li>• Always connected to the mains.</li> <li>• Monitors can come in any sizes</li> <li>• Can be upgraded and parts easily replaced.</li> <li>• Tend to have a higher specifications than laptop computers.</li> </ul>	<ul style="list-style-type: none"> <li>• Not portable</li> <li>• Takes up more desk space.</li> <li>• Separate components like keyboard, mouse, monitor, speakers etc.</li> <li>• Loose cables which could be trip hazards.</li> </ul>
<b>Laptop Computer</b> 	<ul style="list-style-type: none"> <li>• Its portable due to small size and weight.</li> <li>• Battery can be recharged.</li> <li>• Can connect wireless to internet.</li> <li>• No loose cables. All components connected together.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited battery life.</li> <li>• Laptops are difficult to repair and upgrade.</li> <li>• Can be stolen or lost.</li> <li>• Some users find it difficult to use pointing device.</li> </ul>
<b>Tablet Computer</b> 	<ul style="list-style-type: none"> <li>• High definition anti glare display.</li> <li>• Wireless , 3G/4G &amp; Bluetooth connection.</li> <li>• Data can backed up or synchronised with other devices.</li> <li>• Touch screen technology</li> <li>• Battery life longer than a mobile phone.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited memory compared to laptops.</li> <li>• Expensive to use 3G/4G internet</li> <li>• Typing can be more difficult compared to a normal keyboard.</li> <li>• Not all files are compatible with tablets.</li> </ul>
<b>Smart Phone</b> 	<ul style="list-style-type: none"> <li>• Small in size and easier to carry around.</li> <li>• Can be used whilst on the move using wireless or 3G/4G Connectivity.</li> <li>• Touch screen technology</li> </ul>	<ul style="list-style-type: none"> <li>• Small screens make it difficult to read.</li> <li>• Battery life is short</li> <li>• Could be misplaced or stolen</li> <li>• Limited storage/memory compared to other types of computers.</li> <li>• Slow data transfer rates</li> </ul>

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Describe the advantages and disadvantages of using each type of computer?

### Exam Question



A desktop computer (PC) is always **connected to a power source** so you do not have to worry about the **battery running out**. In addition a PC is easier to **upgrade** as individual components can be replaced. Furthermore the PC tends have a **higher performance** compared to laptop, tablet and smart phones. However the PC is **not portable** and **loose cables could be a trip hazard**. More **desk space** is required for the PC and **separate components** such a mouse and keyboard would have to be purchased also. The main advantage of using the laptop computer is that it is **portable** and it does not need to **be connected to a power source all the time**. However the **battery is limited** and would require a regular charge. Some users may also find using **the touch pad quite difficult** to maneuver the pointer on the screen. However **no additional components** would have to be purchased as the touchpad, keyboard and screen are built into the monitor. On the other hand the laptop could be **lost or stolen**. The Tablet is **even more portable than the laptop** and tends to have a **longer battery life** compared the laptop and smartphone. In addition It can either connect to the internet **wirelessly or via mobile networks**. In contrast the **screen is smaller on a tablet** and it may be more difficult to **create resources compared to laptop or PC**. The smart phone is **more portable than a tablet** and like the tablet can connect to internet either wirelessly or through the mobile networks. The **performance and storage of the smart phone will be limited** compared to the other computers. Some users may also find it difficult the touch screen difficult to use due to **the smaller screen**.



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## 1.4 Types of computer

Discuss the advantages and disadvantages to a teacher of using a tablet computer instead of another type of computer.

**Exam Question**



The advantage of using a tablet device in the class room is that it is **more portable than a PC or laptop**. **Internet** can be accessed in most places either **wirelessly or via mobile networks (4G)**. However the tablet will have a **smaller screen than a monitor or screen on a laptop**. In addition the **tablet is not as portable as a smart phone**. On the other hand **specific applications** may be used to help the students interact with the lesson. Nevertheless it may prove more **difficult to create worksheets** and lesson resources on the tablet compared to using a PC or laptop.