**P1/P2 – Understand what is meant by the Internet of Everything (IoE)**

You need to create a written report that explains what the **Internet of Everything** is. Below are a list of things that need to be included in the report. Use this a checklist to ensure you have covered all the relevant points. Make sure you include a variety of relevant examples throughout your work and reference where you got your information from at the end of the document. Remember to use the textbook for help and support.

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| Subheading | Information which MUST be included | Completed? |
| 1.1 Things | **Physical objects** e.g. smart fridges, pet feeders, smart boilers, smart TVs, drones  **Experiential interactions** e.g. virtual reality to visit places/experience sports events  **Aids to people** e.g. smart watch, smart training shoes, patient monitoring systems, connected clothing  **Aids to society/community** e.g. heart monitor implants, fitness trackers  **Machines** e.g. body sensors to control things in a room, sensors to monitor water quality of lakes rivers, sensors on bins to measure waste |  |
| 1.2 where the IoE is used | Explain in a paragraph where and by who the IoE is used. Give a range of different examples |  |
| 1.3 Applications of the use of the IoE | For each of the categories listed below explain how the IoE has helped to change how people do things and what developments there may be in the future.  Body/health  Home/garden  City/neighborhood  Industry  The environment |  |
| 1.5 The four pillars of the IoE | Explain what the four pillars of the IoE are. |  |
| 1.6 and 1.7 People and how they connect | Explain which different groups in society use the internet of everything. Include students, children, adults and the elderly.  Describe the different ways people can connect to the IoE and what they can do when connected. Include information on :  Devices  Social networks and wearable devices |  |
| 1.8 Converting data into information to allow people to make decisions and 1.9 Data | Remember to use examples. You must include information about:  Raw data  Connected things (devices)  Analysis  Decisions  results |  |
| 1.10 Information gathering devices | Explain what IoE devices help people to collect information. Give a variety of examples. Use the diagram on P. 353 of the hand out to give you some ideas of what to write about. Include information about:  Computers  Smart phones  Vehicles  Other devices/sensors |  |
| 1.11 Process | Use page 361 in the text book to help you to explain this section on process |  |
| 1.12 Processing capabilities | Explain and give examples of the different processing capabilities listed below:  Local – one PC – limited processing capabilities – limited options to shared data processing. E.g. done manually via email.  Server – networked computers – easier to share data, quicker to process.  Big data technologies – Process large amounts of data to identify trends. Mainframe computers can be used for this. Give examples of what data can be used. |  |
| 1.13 Connectivity | Explain how different types of connectivity can be used to access the IoE. Explain which devices are most likely to be connected with the different types of connection. You need to include the following types of connection:  Wired  Wi-Fi  Bluetooth  Local connections – LAN  Cloud-based  Data centre-based  Radio-frequency identification (RFID) |  |
| 1.14 Network connection | Describe what is necessary to maintain a network connection for the IoE. Explain the following point which have been listed below:  Manageable – Systems need to be easy to manage and operate. Network teams to manage who has access to what and which devices.  Intelligent – networks can be intelligent for example if it fails it will automatically re-route to find alternative connection.  Secure – All systems need relevant and appropriate security.  Scalability – Needs to be appropriate to needs and environment.  Congestion – Certain data devices prioritised or users given reduced access if there are issues to ensure congestion is limited. |  |
| 1.15 Security issues | Discuss different security issues that relate to using the IoE. Use information from unit 1/3 to help you. Remember to explain the problem as well as the solutions that are necessary to counteract issues related to cyber security.  Include information about:  Ownership of personal information  Unauthorized access and misuse of personal information. |  |