A Digital devices in IT systems

A1 Digital devices, their functions and use

• Digital devices that form part or all of IT systems:
o multifunctional devices
o personal computers
o mobile devices
o servers
o entertainment systems
o digital cameras – still, video
o navigation systems
o data capture and collection systems
o communication devices and systems.

A2 Peripheral devices and media

• Peripheral devices used with other digital devices to form part of an IT system:
o input devices
o output devices
o storage devices.

A3 Computer software in an IT system

• Types of operating system:
o real-time operating system
o single-user single task
o single-user multi-tasking
o multi-user.

The role of the operating system in managing:
o networking
o security
o memory management
o multi-tasking
o device drivers.

• Types of user interfaces:
o graphical
o command line
o menu based
o adapted.

• Utility software

• Application software

B Transmitting data

B2 Networks
• The features, use and purpose of different networks:
o personal area network (PAN)
o local area network (LAN)
o wide area network (WAN)
o virtual private network (VPN)

B3 Issues relating to transmission of data

o bandwidth
o latency.
• Types of compression:
o lossy
o lossless.

C Operating online

C2 Online communities
• Ways of communicating and interacting with online communities:

o social media
o blog, microblog, vlog
o wiki
o chatrooms
o instant messaging
o podcasts
o forums.

D Protecting data and information

D1 Threats to data, information and systems

• The characteristics of threats to data:
o viruses and other malware
o hackers
o phishing

D2 Protecting data

• Processes and implications of techniques for protecting data and systems:
o file permissions
o access levels
o backup and recovery procedures
o passwords
o physical access control
o digital certificates

E Impact of IT systems

E1 Online services

The uses, impact and implications for individuals and organisations of:
o transactional data
o targeted marketing
o collaborative working.

E2 Impact on organisations
• The features and implications of IT systems used by organisations for:
o stock control
o data logging
o data analysis

F Issues

F2 Legal issues
The legal issues relating to the use of IT systems and the implications for individuals, organisations and wider society.

• The moral and ethical factors of the use of IT systems:
o health and safety
o copyright
o computer misuse
o protection of data
o privacy
o accessibility.