

# IGCSE June 2011

## Revision

### **Chapter 1 – Hardware**

1. Game Console  
Device/PC which is used in multimedia entertainment and gaming. It's an input and output device. Consists of screen/HDD/input devices/internet connection eg: Microsoft Xbox / Sony play station /Nintendo
2. Embedded Computer  
used for specific application / performs limited dedicated functions / contains a microprocessor / eg: washing machines, DVD players
3. Cores  
main processor contains several processors built into it.
4. Processor  
Home user – AMD sempron/Athlon, Intel dual core  
Multimedia applications – Intel quad core
5. Example microprocessor  
Intel Core 2 duo / 3.33GHz/1333MHz FSB(carries data between processor and memory/6MB cache (Will store frequently used programs and data)
6. Chip and Pin readers – read data in smart cards and magnetic stripe s
7. Buffer – small memory in the printer to store print jobs, Spooling – print jobs are put into a queue on a server in priority basis
8. Actuators/Control devices – heaters, coolers, motors, buzzers and alarms

### **Chapter 2 – Backing Storage**

1. Storage medium - the material used to store data
2. Hard disk capacity – (number of readable sides X number of cylinders/number of tracks X sectors per track X bytes per track)
3. RAID – multiple copies of data on different hard disk drives
4. DVD – 4.7GB / Blu Ray – 50GB
5. IAS – memory immediately accessible to the processor.
6. Flash memory - eg: BIOS chip / Sometimes portable eg: USB pens
7. Word Size – measured in BITS 32bit, 64bit
8. Scanners – OCR, Magnetic Stripe Card readers read Alphanumeric
9. Types of printers
10. Multifunction Devices – advantages and disadvantages

## **Chapter 3 – Software**

1. System Software / Application software
2. Project Management software/Educational Software/Integrated Software/Specialised Software/General Purpose Software/Off-the-shelf software
3. Bespoke Software/Customised Software
4. Parallel Processing/Multi Tasking
5. File Paths/File Extensions - .xlsx, .csv, .etc
6. Software licence / Software piracy / Licensed Software/ Public Domain Software(freeware)/ Open source software / Shareware / Creative commons / Demonstration disk

## **Chapter 4 – Word Processing and Desktop Publishing**

1. Proof Reading
2. Mail merge – main document / data source(database, spreadsheet, word document) } merged documents

## **Chapter 5 – Spreadsheets and Modelling**

1. Formulae / Functions (SUM, AVERAGE) / Terms e.g. Cell, Cell reference, range reference etc.
2. Exponentiation – e.g.: B7^2 (B7 into the power of 2)
3. Absolute cell reference / Relative cell reference / Cell Formatting / Sorting
4. Lookup / IF / Nested IF / Mathematical Modelling / page 110 (super market model)

## **Chapter 6 – Database**

1. Data Types / Field Properties / Primary Key / Validation Rules / Field Size / Relationships / Calculated fields

## **Chapter 7 – Graphics, Video and audio editing software**

1. Vector and bitmap graphics
2. Sampling Rate

## **Chapter 8 – Presentation**

1. Slide transition / Themes / advantages of using presentation software

## **Chapter 9 – Communications, networks and the Internet**

1. Types of networks – LAN/WAN/Internet/Intranet/Extranet/VPN
2. Client-server / Peer-to-Peer
3. Booster
4. Narrowband / Broadband
5. Hypermedia – documents that contain links to text, graphics, sound, video files
6. TCP/IP – universal standard that enables hardware and operating systems from different computers to communicate
7. Online/Offline

8. Web addresses
9. Spider – programs that collect information from websites and update the search engine database
10. Searching the web – keywords + - “ “
11. Webot – that run automatically on the web searching information and alerting the user eg: copernic / snipping tools / web whacker
12. VPN – private network that runs within public networks, network traffic will be encrypted
13. Distribution List – list of contacts grouped together
14. Customer support
15. Electronic Discussion Forums – Mailing Lists / newsgroups, Thread – all the discussion about a single topic
16. Different chat methods
17. Video Conferencing / Web Ring / Web 2.0 / Blogs – Online personal Diaries
18. Wikis – A database of pages that you can edit
19. Threats – Viruses / Spam / Phishing - mainly through email attempting to find out personal information/ Pharming – collect personal information when users connect to a legitimate site
20. Filter software – URL filtering / Keyword Filtering / Customised filtering / Activity reporting / Notification / Remote Management / Personal Information Blocking
21. Unauthorised access / Firewall - Parental Control Software / Antivirus / Pop-up blocker/ Keyword alert / Cookie Manager

## **Chapter 10 – Web Authoring**

1. HTML Coding and what they are used for (No need to remember the syntax.
2. Advantages of using text editors and web authoring Software
3. Website / Web server

## **Chapter 11 – Data Input and Output**

1. How data capture forms should be created
2. Electronic methods of data capturing
3. Validation methods with examples
4. Check digit example – ISBN
5. Limitation examples of verification and validation
6. Different form controls – check box / combo / radio button
7. Turnaround document – Output is given to external audience but they will fill them and return back to organization
8. Timing of output and accessibility – connection speed / physical access / disability
9. Data Encoding – using a brief code to represent a more detailed and lengthy description - advantages

## **Chapter 12 – Applications and Effects**

1. Payroll / Airline Booking / Supermarket / Banking / Engineering and Manufacturing / CAD, CAM / Weather Stations / Process Control / Logistics / Education / Law / Health and Medicine / Libraries / Entertainment and leisure
2. Grandfather - Father - son principle

3. Direct / multi access
4. Batch Processing / Offline and Online
5. Hot standby – additional computer available if the main computer breaks down
6. Real-time backups – Finger printing – any changes to file are done on both disks at the same time
7. General purpose ICT systems / Real-time systems – processing must be instantaneous and immediate
8. Online systems - checkouts and other terminals connected to a computer
9. Real-time systems are online but not all online systems are real-time eg: stock control system
10. Components of the supermarket ICT system - POS Terminal / Hand held terminal / Self-service POS Terminal / Mobile Terminals
11. EFT / EFTPOS / Debit and Credit cards / Smart Cards
12. Data Logging / Sensors
13. Process Control – Advantages and disadvantages
14. VLE - blackboard / CAL-CAI – helps students to further their skills using ICT
15. Categories of CAL programs – Drill and Practice / Tutorials / Simulations, advantages and disadvantages
16. SIMS – advantages and disadvantages
17. Medical Expert Systems – Inference Engine / Knowledge Base, Advantages
18. Telemedicine
19. Media Streaming
20. Social Impact of ICT – Teleworking / Digital Divide
21. Privacy – Data Protection Act statements
22. Hacking / Identity Theft / Phishing / Scam
23. Physical Safeguards examples
24. Software safeguards
25. Individual Responsibility

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