

Stanwell School

WJEC PAPER 2

KEY WORDS

PDA



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Paper 2

Key Word/Phrase/Question	Answer
what ROM is used for	To store a program (permanently) that is required to boot/start the computer.
what RAM is used for.	To store programs/software and data when the computer is switched on. (temporary)
meaning of the BIT	binary digit / 0 or 1
meaning of the BYTE	a group of bits usually 8 (working unit of data)
what you understand by the terms <i>Kilobyte</i> and <i>Megabyte</i>	kilobyte 1024 (1000) bytes megabyte 1024 (1000) kilobytes (million bytes)
Explain the term ' <i>disk cache</i> '.	fast temporary storage
Give an example of when you would use a ' <i>disk cache</i> '.	temporary web pages or holding part of a program (data) which is used often, Copying music/DVD
<i>Data Protection Act</i> (DPA) has eight basic principles List four of these principles	Personal data should be up to date and accurate Data to be adequate, relevant, not excessive Data should not be kept longer than necessary Must only be used for the purpose collected. Not to be transferred to countries outside EU or without adequate provision Fairly and lawfully processed Kept secure against loss Processed within the rights of data subjects
two rights individuals have regarding data held about them on computer	To view the data, to ask for incorrect data to be put right, Right to compensation if something goes wrong and the data hasn't been changed
two exemptions from the DPA.	National Security/Government, law and order, inland revenue, small clubs, home use, company payroll, company flyer distribution (mailing lists), personal data, medical, school work, statistical data , family history.
List four features of a GUI	windows, icons, menu/mouse, pointer, colour, help, tutorials, customisation, common layout, accessibility function
one disadvantage of using a GUI	heavy on memory / need a faster computer/

	more powerful computer, can be distracting, colour combination can be a problem, longer to load
two other <i>different</i> types of user interface and give an advantage for each type	(i) command driven (CLI) (DOS) Advantage once commands are learnt, system is quicker to operate (ii) menu driven Advantage no need to learn commands, but tends to be slow and cumbersome, cannot use anything else
Explain what is meant by the term <i>operating system</i> .	software (program) that controls the computer
three <i>different</i> functions of an operating system	Enables software to run/supervises running of programs, manages system resources, controls hardware, controls software, handles inputs and outputs and the storage of data, handles interrupts, organises system security, allows multiprogramming etc, allocates memory/controls memory
Name one operating system with which you are familiar	DOS, WINDOWS, UNIX, LINUX, MACOS, SUN
Name an application that uses <i>real time processing</i> and explain why this type of processing is suitable.	Application Chemical Production Explanation processing of input data must be done in a split second, immediate to avoid a dangerous situation. (time critical)
Name an application that uses <i>real time transaction processing</i> and explain why this type of processing is suitable.	Application theatre/ cinema/airline seat bookings Explanation processing of input data must be done quickly to avoid double booking. i.e. online shopping, ATM, lottery ticket, internet banking, bill paying
what is meant multi-tasking	Multi-tasking: The processor divides its time between programs. A time slice is allocated to each process. The processor switches between processes so quickly that the user is often not aware of any delay The system being able to run more than one job/task at the same time
Multi-programming	the processor divides its time between programs, a time-slice is allocated to each process
what is meant multi-access	multi-access: Many users can make use of a computer resource simultaneously
Explain what is meant by the term <i>expert system</i>	Programs that attempt to replicate a human expert on some specialised subject

	or knowledge based system that allows you to make decisions (inferences) .
two of the main components of an expert system	Knowledge base, inference engine, user interface
one benefit to the <i>patient</i> of using an expert system	patients may prefer privacy/ less embarrassed, save waiting time Outside surgery hours, second opinion
one benefit to the <i>doctor</i> of using an expert system	has up to date medical knowledge, frees up doctors time, less human error, second opinion
one possible <i>drawback</i> of using such a system	power failure, data corruption, expensive to buy, needs constant updating, GIGO, lack of human touch, overdependence. (not contrary to an advantage)
Explain the terms field	field a collection of related characters (data). Or group of information under one heading
Explain the terms record	record a collection of related fields / All the information about one person
Explain the terms file	file a collection of related records
Give one advantage of using <i>fixed length</i> fields	easier to program, faster to search, calculate size of file, less processing when a change is made
Give one advantage of using <i>variable length</i> fields	saves disk space, no data truncation.
data types <i>Pupil Id</i> <i>Form</i>	auto number, numeric, integer text, string , alphanumeric, memo, list
Explain what is meant by an <i>embedded computer system</i>	Devices which have built in microprocessors / device with a chip for a specific purpose / devices with chip in it
two examples of devices/machines which contain embedded computer systems	telephones, microwaves, missiles, cameras, microwave ovens
advantages of using robots in car manufacturing	work 24/7, no tea breaks, consistency, dangerous areas, long term cost
Write down what LAN stands for:	Local Area Network
Write down what WAN stands for	Wide Area Network
two advantages of networks over standalone computers	Share software, share data, better communications, can access work from any station, easier to backup, central monitoring
Write down one method by which the code on the item can be input automatically at	scanner, light pen, bar code reader

the PoS.	
<p><i>Electronically stored data can be misused more easily than manually recorded data</i></p> <p>developments in ICT that support the statement; three examples of the misuse of personal data held on computer steps taken by organisations to prevent the misuse of electronically stored data</p>	<p>broadband, networks, wireless technology, satellite, e-mail, internet, bluetooth</p> <p>introduction of viruses, phishing, pharming, identity theft</p> <p>hacking unauthorised entry to computer system, quicker to find info,</p> <p>computer fraud operators use computers to own advantage</p> <p>computer blackmail, junk mail, memory sticks</p> <p>firewalls, antivirus software</p> <p>encryption, id 's , passwords</p> <p>retina, fingerprints, security, CCTV</p>
Stock control Process	<p>scan bar code – keyboard – weighing scales - product code – check digit –</p> <p>search database- extract description, cost print details on bill-</p> <p>take money, debit card, cash, credit card,</p> <p>reduce amount in stock- check amount left in stock against minimum</p> <p>stock level – reorder and produce order</p>
OMR	<p>exam boards recording cand marks</p> <p>lottery recording choice of numbers</p>
Touch Screen	<p>pubs quiz machines</p> <p>Shops Enter goods</p> <p>Driving theory test Entering answers</p>
Sensors	<p>banks burglar alarms</p> <p>shops stop conveyor belt</p> <p>hospitals monitoring patients</p>
<p>three <i>different</i> features and uses of a CAD package</p> <p>COMPUTER AIDED DESIGN</p>	<p>feature - draw and edit shapes and lines 2</p> <p>use - create a plan</p> <p>feature - convert 2d to 3d</p> <p>use - to see what the house looks like</p> <p>feature - render colours and textures onto shapes</p> <p>use - to try out different finishes</p> <p>feature - add predrawn shapes eg kitchen items 2</p> <p>use - to see if room layout works</p> <p>feature - rotation</p> <p>use - to see house from different angles</p> <p>feature - zoom</p> <p>use - to see things in more detail</p>
two different <i>output</i>	<p>plotter, printer, actuator, motor 1</p> <p>monitor, speakers,screen, vdu, headphones</p>
Example and advantages of using CAL in the classroom[Computer aided Learning]	<p>ICT theteacher.org.uk</p> <p>there is individual tuition</p> <p>students can go over the material again and</p>

	again in their own time including repeating test material to improve their score Quiz it generally improves student performance its fun, interactive nature, use of multimedia immediate feedback, variety of learning styles
Disadvantage of CAL	teacher may have difficulty getting students to pay attention in class because they will not stop using the software when asked. less teacher student interaction reduces social interaction expensive to buy, cannot use if internet
Validation and Verification Mistake and method to prevent	Mistake : Daaavies verification –Method -proof reading / visual check, double entry Mistake : 57/02/09 validation :Methods range check
two different types of <i>application software</i>	s/s, wp, dtp, db (no marks for brand names) 1 not PowerPoint or Publisher payroll, billing,
three <i>other</i> functions of an operating system	enables software to run / runs software manages system resources / controls memory controls hardware handles interrupts boots up / shuts down the computer manages memory display data on the screen managing multi-tasking managing multi-access manages security manages user accounts
three activities a systems analyst would carry out when <i>analysing</i>	interview, questionnaire, observe, inspect documents, dfd for old system background information, aims and objectives, problems in current system, feasibility study
three activities a systems analyst would carry out when <i>designing</i>	alternative methods of solution, hardware, software, algorithms, input/output/processing, dfd for new system testing strategy, design of documents, user interface design, dcf, dsf, design of formulae evaluation criteria, validation criteria
meant by <i>parallel running</i>	new and old system running side by side / together when new system produces same results as old system i.e. with no errors
'The paperless school office is nearly upon us' five ways ICT has helped to advance this development. In addition point out at least four advantages or disadvantages of a paperless office	e-mail, teleconferencing, scanning presentations, databases, spreadsheet, registration, intranet, extranet, networks, internet, edit file transfer, swipe cards in canteen, electronic newsletter / bulletin boards, Advantages paper costs are lower, searching, sorting is quicker, reduction in the cost of hardware, saves space in the office range of work has increased, helping the environment, secure because of backup, Disadvantages cost of installing, data might be less secure, staff training, change in working practices, viruses, power cut(qualified), hacking (qualified)
TWO advantages of process control	24/7 / no breaks, little human interaction,

systems	cheaper in the long run, greater consistency, no need for rest room, do not need to be paid people are not exposed to dangerous environments
TWO disadvantages of such process control systems	expensive equipment to buy, response to emergencies, power cut product damaged, unemployment, specialist maintenance staff
examples of industries that use computer process control	steel manufacturing, car manufacturing, print industry, chemical manufacturing, bottling/brewing
<i>What is batch processing</i>	a group of data or programs collected together and run through the computer in one go