

Sheet1

TOPIC,C,30	KEYPOINT,C,30	PRO
BASICS	Abbreviations	A
BASICS	Units	B
BASICS	Application of Computers	C
INFORMATION SYSTEMS	Examples	D
INFORMATION SYSTEMS	Security and Integrity	E
INFORMATION SYSTEMS	Videotex	F
INFORMATION SYSTEMS	Data Protection Act	G
INFORMATION SYSTEMS	Social Implications	H
HARDWARE	The CPU	I
HARDWARE	Memory	J
HARDWARE	Input (1)	K
HARDWARE	Input (2)	L
HARDWARE	Output (1)	M
HARDWARE	Output (2)	N
HARDWARE	Backing Storage	O
HARDWARE	Communications Devices	P
MACHINE REPRESENTATION OF DATA	Bits	Q
MACHINE REPRESENTATION OF DATA	Bytes and Words	R
MACHINE REPRESENTATION OF DATA	Characters	S
MACHINE REPRESENTATION OF DATA	Numbers	T
MACHINE REPRESENTATION OF DATA	Fractions	U
MACHINE REPRESENTATION OF DATA	Fractions, continued	V
MACHINE REPRESENTATION OF DATA	Positive and negative numbers	W
MACHINE REPRESENTATION OF DATA	Hexadecimal	X
MACHINE REPRESENTATION OF DATA	Instructions	Y
FILES	File Structure	Z
FILES	FILE STRUCTURE (2)	AA
FILES	File organisation and access	AB
FILES	File organisation & access (2)	AC
FILES	Updating	AD
FILES	Sorting,Merging,Interrogation.	AE
FILES	Protection	AF
SYSTEMS ANALYSIS	Steps involved	AG
SYSTEMS ANALYSIS	System flowcharts	AH
DATA INPUT	The data processing system	AI
DATA INPUT	Data Capture	AJ
DATA INPUT	Formatted input	AK
OUTPUT DESIGN	Screen output	AL
OUTPUT DESIGN	Screen presentation	AM
OUTPUT DESIGN	Printed output	AN
DOCUMENTATION	Its role in system development	AO
DOCUMENTATION	Sales and User Manuals	AP
DOCUMENTATION	Technical & Program Manuals	AQ

QUEST,C,254

A RAM is...

A dot-matrix printer operating in "near letter quality" mode runs at 40 c.p.s. Roughly how long does it take to print a page containing 100 lines of text?

In industry, computers are increasingly used in what's known as "CAD/CAM". "CAD" is short for "Computer-aided design"; "CAM" is short for "Computer-aided manufacturing".

We reviewed how information is STORED on magnetic tape, disk, or other storage media in a computer system. What is the primary purpose of backing up files?

Backing-up files is a means of improving data security.

Which costs the individual user more to operate, Teletext or Viewdata?

A question requiring multiple-choice answers is inappropriate for this particular topic. You are likely to be asked to write a description of a system.

As well as taking-over some jobs from people, computer systems will be responsible for the creation of new jobs - which of the following is not a likely job?

Data is transferred from backing memory to main memory in response to a signal from...

The main memory of a computer is mostly:

Most computer data is input using...

Numbers on a bank cheque are read using...

Name one advantage that a daisywheel printer has over a dot-matrix printer.

Which of the following outputs is human readable without any extra device?

Data is recorded on magnetic disks on "tracks". These tracks are further subdivided to help in finding the data again. What is the name of the subdivision?

Which of the following statements about a modem is not true?

Which of the following is not a two-state system?

A processor operates on 32-bit words, and uses a single byte to represent each character. How many words are needed to represent a page of 100 lines of text?

How would you describe this particular character: Æ ?

What is the decimal equivalent of the binary number 10111?

Convert the decimal (denary) number 7.125 to a binary equivalent as previously shown.

The position of the decimal point in floating point representation is defined by...

What is the following sign-and-magnitude number in decimal?

100

What is the hexadecimal equivalent of the following byte:

101

Which of the following is NOT a type of instruction in a processor's instruction set?

Which of the following is in the correct order to represent decreasing order of size?

Which, out of the following fields of a Personnel Data File is likely to be the Keyfield?

Fieldnames:

Which is the most appropriate class of storage medium for an auto bank teller?

If a file held on backing storage is a Sequential access file, it could sensibly be stored on

When updating a master file, records can be amended (edited), deleted, and what else?

What's the smallest number of files involved in a merge operation?

To protect a file from unauthorised access you would need:

The first step in the development of a new system is analysis. What is the first step to be taken within the analysis process?

System flowcharts are usually encountered in...

Before data can be processed by a computer, it has to be put into a form that can be understood by the computer. What is this form?

Which of the following is not an advantage when using bar-codes and laser scanners at the checkout of a supermarket?

What is the minimum length of a date field? (Day, month and year)

The terms "terminal", "monitor" and "VDU" tend to be used almost interchangeably. Strictly speaking, the monitor is the display device.

When wordprocessing, it is sometimes convenient to have text from two different documents displayed on the screen at the same time.

When specifying the resolution of printers in graphics mode, the term DPI is sometimes quoted. What does this stand for?

Which type of documentation comes last in the development of a new system?

In which manual would you find Error/Recovery procedures.

In which manual would you expect to find installation details.

ANS1,C,30  
A "Read Also Memory"  
5 seconds  
Computer-aided modelling  
Receiving  
Security  
Teletext  
Press [1] or [2] to continue  
Filing clerk  
The ALU  
ROM  
Punched cards  
An Optical Character Reader  
Faster  
Floppy diskette  
Cylinders  
It is a type of interface  
Simple light switch  
Three  
Alphanumeric  
23  
1 1 1 . 1 2 5  
The Mantissa  
+27  
B7  
Arithmetic  
Field - Record - File  
NAME  
SERIAL  
Disk only  
Indexed  
One  
Backups  
Understanding existing system  
Feasibility studies  
Decoding  
Reduction of cashier error  
2 characters  
Visual Display Unit  
Windows  
Desk-top Publishing Indicator  
Program Documentation  
Sales Manual  
Technical Manual

## Sheet1

RESP1,C,200

No - it's a type of memory though; review the details...

No - the printer speed is quoted in CHARACTERS per second, not WORDS per second...

Good guess, but not what the term usually means - have another look at the facts page for the correct answer.

No... This term is concerned with communication between two or more computer systems

That's right! You reduce your risk of losing your files and thus improve your security.

No - once you have paid for the special T.V. set, or adaptor, the service is free to users, other than the cost of the T.V. being

Press any key to continue!

If anything, this is a job that will be taken-over by computer systems, and the person involved may in future be responsible

No; this is where arithmetic and logical calculations are carried out, but control of this and other data transfers lies elsewhere.

No - it is not possible to repeatedly "write" to ROM, so this type of memory is unsuitable for main store. Review the facts...

Punched cards are now a less common input medium. Please review the summary.

No - the numbers on a cheque use magnetic ink.

No - in fact it is quite the opposite. Daisywheel printers are slower than dot-matrix.

The magnetic information stored on diskettes is not directly readable by humans.

Not cylinders. A cylinder is the term given to the set of the "same" tracks through a disk pack.

A Modem IS a form of interface. Try again please.

A simple light switch is either off or on - it is a simple example of a two-state system.

No - you have probably omitted the spaces either side of the "AND" in your character count. You need to do this, making the

No: this character is neither alphabetic or numerical.

Correct! 10111 in binary is 23 in decimal system.

You've got the binary equivalent correct BEFORE the decimal place, but not after. The .125 in decimal is 1/8 - what's this in binary?

Wrong. The mantissa is the digits of the actual number itself.

Wrong sign. The first bit, "1" means minus.

Well done! The procedure is to split the binary number up into groups of four bits and convert each group of four into hexadecimal.

No, there ARE arithmetic instructions.

Not right. A file is the largest, so this should be first... Look at the facts review for the remaining order.

Not really - because it IS possible for there to be duplication of names (and initials) within the same Company. Look for a UNIQUE

No, serial storage would take too long to locate the customer's account.

No. To locate the required record serial access must be used. Either tape or disk could be used for this.

No, this is a way of rearranging the way the records may be presented, but the data is not updated itself.

No. There are at least two files to merge and one resulting file.

No - a series of back copies of a file are needed in case of data loss or corruption.

Exactly! The system analyst has to understand the existing system in detail before he/she can go any further. The existing system

System flowcharts would not normally be produced at this stage, but a little later...

Not quite. This is what happens to the outputted data to make it easily comprehended by humans.

Bar codes lead to a reduction of error at checkouts which IS an advantage.

You would not be able to get the following date into two characters:

Right! VDU = Visual Display Unit.

That's right! The screen is divided up into two "windows" in which the different documents are displayed.

No. Please review the summary...

Program documentation is not the last type to be produced.

No. The sales manual does not normally consider errors.

That's right! The technical manual will include installation details

ANS2,C,30  
A "Register Analogue Meter"  
25 seconds  
Computer-aided machining  
Retrieval  
Integrity  
Viewdata  
Press [1] or [2] to continue  
Secretary  
The IAS  
RAM  
Punched paper tape  
An MICR reader  
Higher quality text  
Microfiche  
Sectors  
Various baud rates are used  
Door bell  
Four  
Control  
4  
1 0 1 . 0 0 1  
The Exponent  
+155  
183  
Data Transfer  
File - Field - Record  
DEPARTMENT  
RANDOM  
RAM  
Merged  
Two  
Fire safe  
Detailed specification  
Detailed specifications  
Data Processing  
Speed-up the checkout  
6 characters  
Visual Data Unit  
Icons  
Dots per Inch  
Feasibility Study  
User Manual  
Program Manual

RESP2,C,200

No, a RAM is a type of memory - review the facts...

Correct! Time =  $(200 \times 5) \div 40$  seconds

This is approximate of co

Good guess, but not what the term usually means - have another look at the facts page for the correct answer.

Correct! A system RETRIEVES stored information in order to further process it, or output it.

No - the action of backing-up (making duplicate copies) of the files can do nothing to improve the integrity (the accuracy and co

Yes, you're right! The significant extra cost over Teletext is the cost of the telephone line, and subscription charges. You get r

Press any key to continue!

A secretarial job will be changed by the use of computers, but new jobs of this kind aren't really created by computers (althou

The IAS or Immediate Access Store is another name for the main memory or main store. This does not control data transfe

Correct! The main memory of a computer is normally made up of RAMs and can contain the operating system, programs, and

Paper tape is now a less common input medium.

Please review the summary.

Yes! One advantage of using magnetic ink on cheques is that reading is unaffected by any other marks appearing later.

Correct - the text is identical to that of an electric typewriter (it is produced the same way after all!)

You need some form of extra magnification (a microfiche reader) to read microfiche output.

Right! Tracks are divided up into sectors.

It is true to say that various baud rates are used (see the facts review).

A door bell is either ringing or not ringing: a two state system.

Correct! The statement contains 14 bytes, which fit into 4 words

Control characters control the printer, screen, bell etc. You do not usually see them. Please review the facts.

No... review the facts again, concentrating on the comparison of a binary and a decimal number (enclosed in the heavy borde

Almost, but an error on the integer part of the expression. Redo the conversion of "7" to binary.

Correct! The exponent describes the position of the decimal place.

The left bit "1" signifies that this is a negative number - the magnitude is determined by 11011 only

You've converted to decimal, not hexadecimal...

No, there ARE data transfer instructions. Please review.

No - remember that a Record is comprised of several fields.

No - many people share the same department details. Look for the UNIQUE field...

Yes. The customer needs his account to be accessed rapidly!

No. This is not a backing storage medium. The file would therefore be lost when the computer was turned off.

No, this is not an updating term. See next keyfact.

No. There are at least two files to merge and one resulting file.

No - this would prevent file loss in the event of a fire.

This is during the late stages of the analysis process, when it has been decided to commit to implementation

Correct! System flowcharts are a graphic aid to specifying a system in detail.

No. The term Data Processing describes the whole cycle of computers operating on data.

The checkout process is faster with bar-codes, because the cashier does not have to enter data (the price) by hand into the r

Correct! 6 characters allows you to put in the usual abbreviation for dates, i.e. 22 06 90, for 22nd June 1990 (UK convention)

Wrong. Please check in the facts page...

No. Icons are picture representations of different functions. Review the facts.

Correct! DPI = dots per inch.

No. The feasibility study comes early on in the development process.

Yes! The user manual would tell you what to do in the case of an error or system failure.

No - you will not normally find installation details in the Program Manual.

ANS3,C,30  
A "Random Access Memory"  
5 minutes  
Computer-aided manufacture  
Output

Data Base Administrator  
The Control Unit

Keyboard  
Bar Code Scanner  
Cheaper to buy  
VDU  
Sections  
It both transmits and receives  
Combination lock  
Eight  
Graphics  
29  
1 1 1 . 0 0 1

-27  
ED  
Text manipulation  
File - Record - Field  
STAFF\_NO.

Tape only  
Sorted  
Three  
Passwords  
Feasibility study  
User documentation  
Inputting  
Bar-codes not human-readable.  
12 characters  
Video Display Unit  
Pointer  
Density of Print Index  
Detailed Specification

RESP3,C,200

Yes - a RAM is short for a Random Access Memory!

Not sure how you arrived at this answer - check the definition of c.p.s. in the facts review. Dot matrix printers are faster than

Correct! CAM is short for Computer-aided manufacture. Computers are very good at monitoring and controlling manufacturing

This term applies to getting the information from the computer system to the outside world (such as by printing). The question

Yes! This is an example of a new job arising out of increased use of computer systems.

Exactly! The Control Unit provides this signal.

Correct! If the data is entered "on-line" it's called Direct Data Entry.

No - bar codes aren't used on cheques; review the summary...

No - dot-matrix printers can be cheaper.

Correct! - VDU output (what you're looking at now) is an effective output medium for people to read.

You've got the word slightly wrong - check through the summary once more.

A modem handles both outgoing and incoming signals, sometimes referred to as transmit and receive. Please review the

Well done! A combination lock is not a two-state system. In fact it relies on having thousands of states to avoid being opened

Not right. The statement contains 14 bytes, and each word can include 4 bytes...

Correct! This is an example of a graphics character which could be used with others to construct the border of a diagram for

Not quite right. Start at the right of the binary number. The first 1 is 1 in decimal, the next 1 is 2 in decimal, the next 1 is 4 in

Well done! 7.125 is equivalent to 1 1 1 . 0 0 1

Correct! The left-most bit (called the Most Significant Bit, MSB) signifies the negative, and 11011 is 27 in decimal.

ED is a hexadecimal number, but it's not equivalent to 10110111. Try again, using the table in the review if required.

Yes. This is nothing to do with machine code instructions!

This is right! A file contains many Records, and each record is made up of several fields.

Correct! This is the only field which contains unique data about the person to whom this record refers.

No. Although this is perfectly adequate, it is possible to store a sequential file on disk.

This is to do with rearranging the records in a file, but not with updating them.

Yes. There are at least two files to merge and one resulting file!

Yes! Each AUTHORISED user would have his/her own unique access code.

The feasibility study can only be carried out after the system analyst has understood what is needed.

No. A system flowchart would seldom be seen in user documentation.

No. The question is asking about what has to be done to data BEFORE it is input...

Well done! It's not possible to "read" the bar-code like a normal price. Therefore another label is required stating œ and p, us

You don't need this many characters to record a date - look at how it's done on the review page...

Wrong, but a good guess. Please check in the facts page...

The pointer is the arrow on the screen which can be controlled by a mouse when using the right software.

Not right. Please review the summary...

More documentation follows the detailed specification...



ANS4,C,30

A "Routine Address Marker"

Nurse

A Peripheral Device

Light pen

Quieter

Synthesised speech

Blocks

It requires special lines

Keyboard key

Don't know

10,111

-155

Don't know

Logic

Record - Field - File

TAX\_CODE

Tape or Disk

Inserted

Write Protect Mechanism

Program design

Encoding

Stock control is simplified

Mouse

User Documentation

RESP4,C,200

No, a RAM is a type of memory - review the facts...

This profession is not at all dependant on computers for job- creation, although computers are able to assist nursing staff in  
No. Please review the facts carefully about the parts of the CPU. One part of the CPU carries out the function in the question.

No - light pens have a specialised and limited use. Review the data.

Not really - daisywheel and dot-matrix printers produce similar noise levels .  
Understandable by humans (hopefully), but not READABLE. This is a disadvantage of speech output - there is no permanent record.  
No. A Block is the unit of data that is transferred between computer and tape.  
You're right! A Modem does not necessarily have to use special telephone lines, although it's often the case. The standard is 2400 baud.  
The keys on your keyboard either make contact or they don't; a two- state system...  
Each character requires 1 byte. Number of characters in the statement "BITS AND BYTES" is 14 (spaces are characters too).

You are misunderstanding the relationship between decimal and binary numbering systems. Review the previous facts page and the relationship between the two.

No, the left-most digit is not included in the magnitude of the number in sign-and-magnitude representation.  
Divide the byte up into two. For each group of four bits, find the equivalent hexadecimal number using the table if necessary.  
There ARE logic instructions. Please review.  
You may have misunderstood the question; you are being asked to give the order in decreasing size from left to right. File is the largest.  
No. The same tax code can apply to several different people. Look for the unique field...

Yes! Both media are suitable but it would be more likely to use tape  
That's right! Updating involved amending, inserting and deleting records.

No - this kind of device prevents overwriting of data by mistake.

No... you are mixing up SYSTEM flowcharts with program or algorithm flowcharts.  
Correct! Data has to be encoded before it is input to the processing stage.  
It's true that stock control is simplified. Each reading of a bar- code results in a stock record amendment for that particular product.

The mouse is an input device - it has nothing directly to do with screen presentation.

Correct! User Documentation is the last type of documentation.

ic.