

Hardware and software – AS 9626

1. Nov/2021/Paper_11/No.2

(a) Tick the most accurate statement referring to the purpose of input devices.

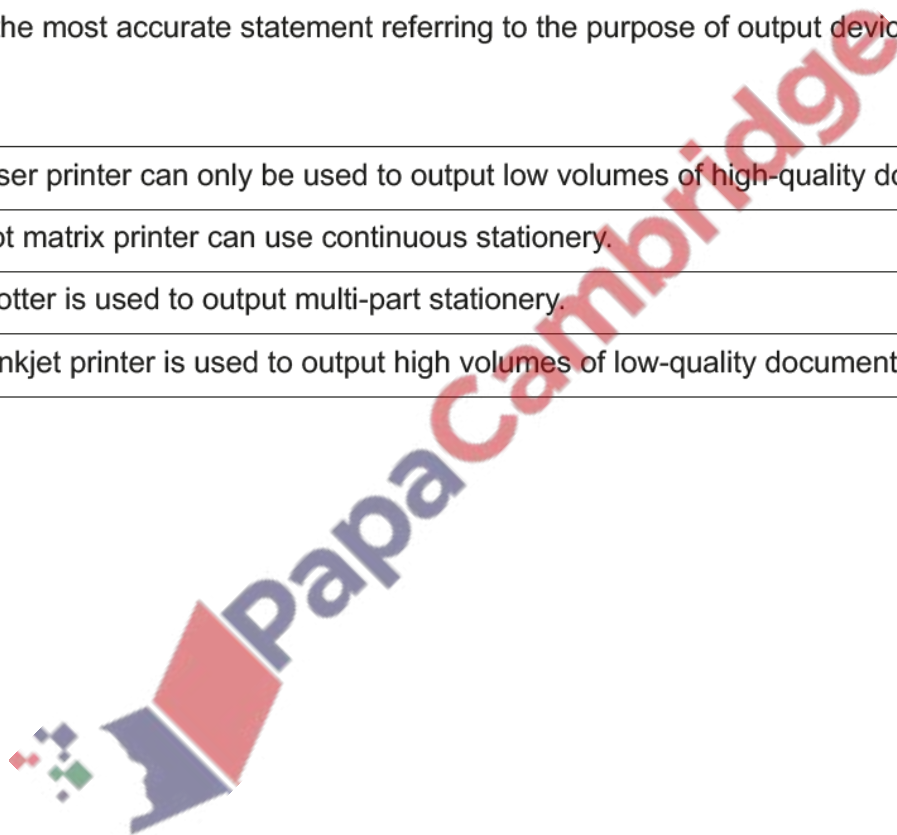
	✓
A sensor is used to store data for later use.	
A magnetic chip reader is used to enter text directly from a bank card.	
A bar code reader is used to read magnetic ink characters.	
A touchpad is used to simulate the behaviour of a mouse when using a laptop computer.	

[1]

(b) Tick the most accurate statement referring to the purpose of output devices.

	✓
A laser printer can only be used to output low volumes of high-quality documents.	
A dot matrix printer can use continuous stationery.	
A plotter is used to output multi-part stationery.	
An inkjet printer is used to output high volumes of low-quality documents.	

[1]



3. Nov/2021/Paper_11/No.5

A company owner wishes to buy software to use to produce advertising materials for her company. She can either buy custom written software or off-the-shelf software.

(a) Describe **three** benefits of using custom written software.

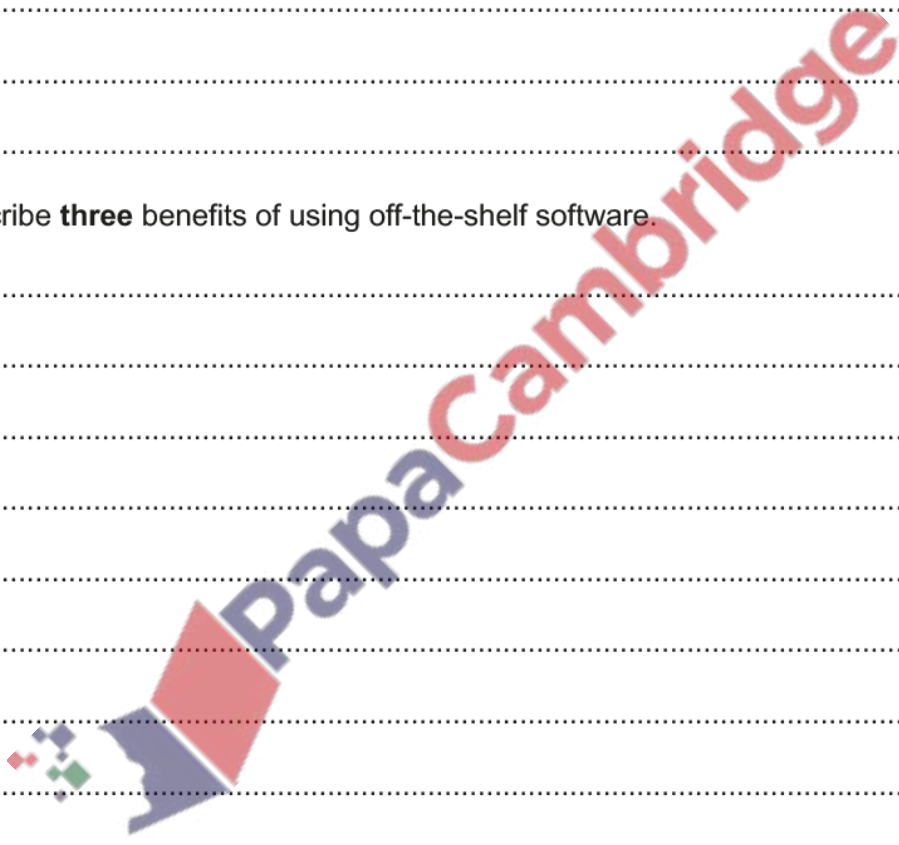
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(b) Describe **three** benefits of using off-the-shelf software.

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A printer driver is a type of device driver.

(a) Tick the most accurate statement regarding printer drivers.

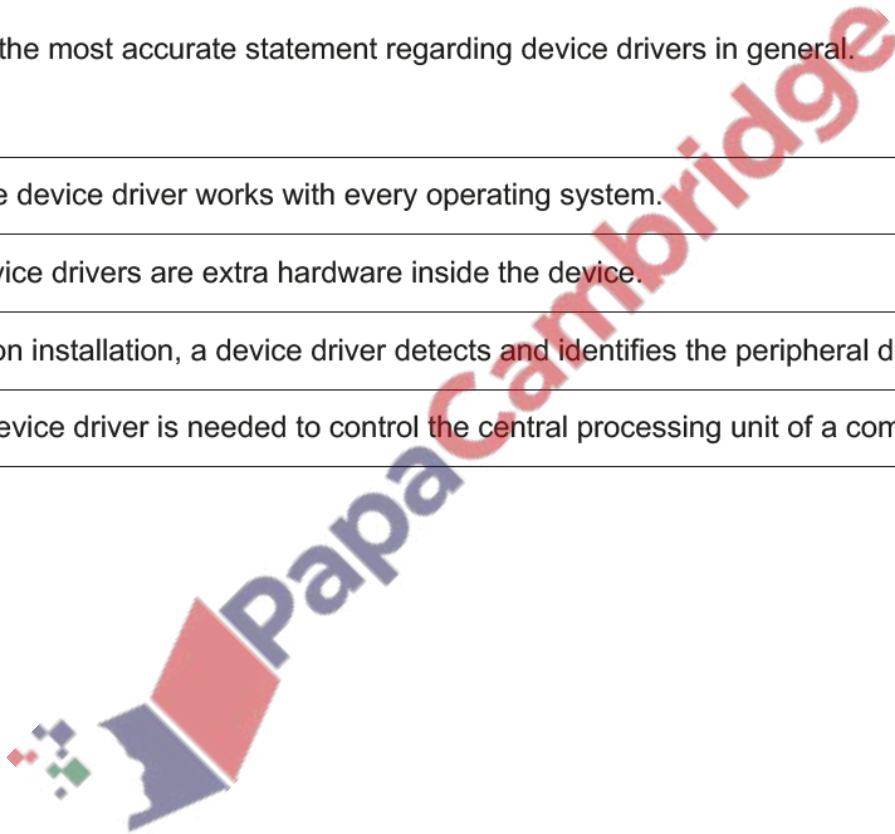
	✓
They are used to control the hard disk drive.	
They handle the translation of requests between the computer and the printer.	
One printer driver can control any printer.	
They ensure that there are no paper jams.	

[1]

(b) Tick the most accurate statement regarding device drivers in general.

	✓
One device driver works with every operating system.	
Device drivers are extra hardware inside the device.	
Upon installation, a device driver detects and identifies the peripheral device.	
A device driver is needed to control the central processing unit of a computer.	

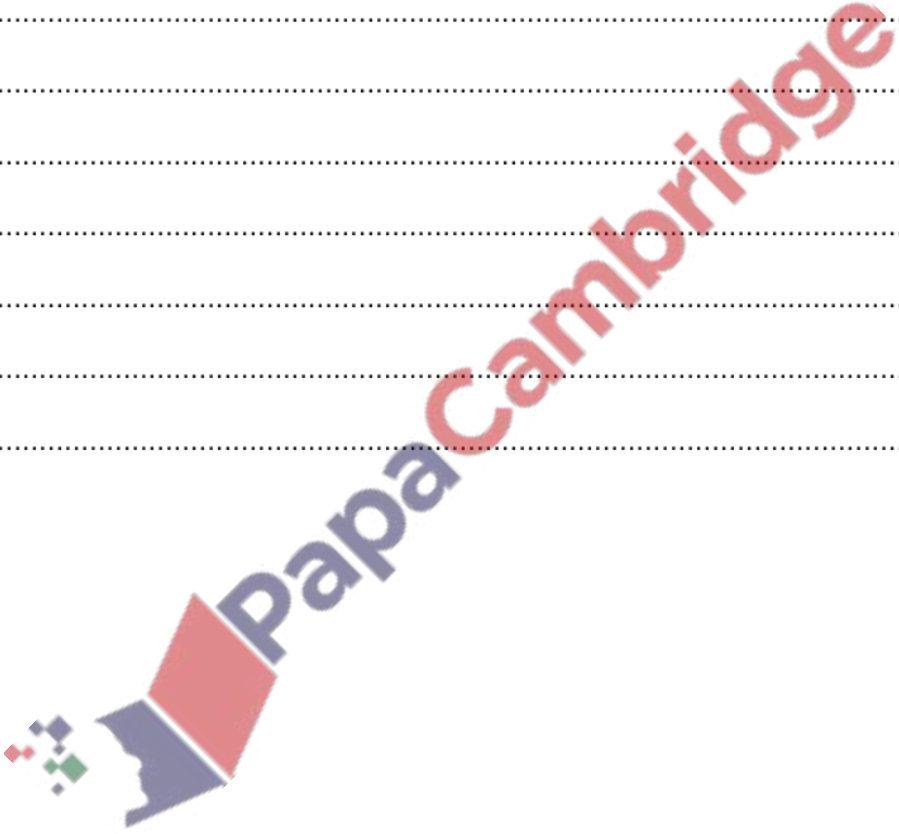
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(c) Explain the purpose of an operating system.

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[6]



A user interface is the method by which a user and a computer exchange information and instructions.

(a) Tick the most accurate statement referring to the use of colour in a user interface for users who suffer from colour blindness (colour vision deficiency).

	✓
It is good practice to use complementary colours such as red text on a green background.	
It is good practice to use text in small sizes and weights to emphasise it against a different-coloured background.	
It is good practice to always use as many colours as possible when designing an interface.	
It is good practice to use a soft-coloured background such as grey or cream to allow text of a different colour to be read more easily.	

[1]

(b) Tick the most accurate statement referring to elements of a user interface.

	✓
Radio buttons only allow you to select one option from a list.	
A text box does not allow you to type numbers into it.	
Text should use the same font size whether the information is important or less important.	
It is a good idea to have a different font size for each word in a title.	

[1]



(c) A developer has been asked to produce software. The software will allow a company's employees to enter data. The user interface will be a graphical user interface (GUI) and must be easy to use.

Describe **four** features of the layout of such a user interface.

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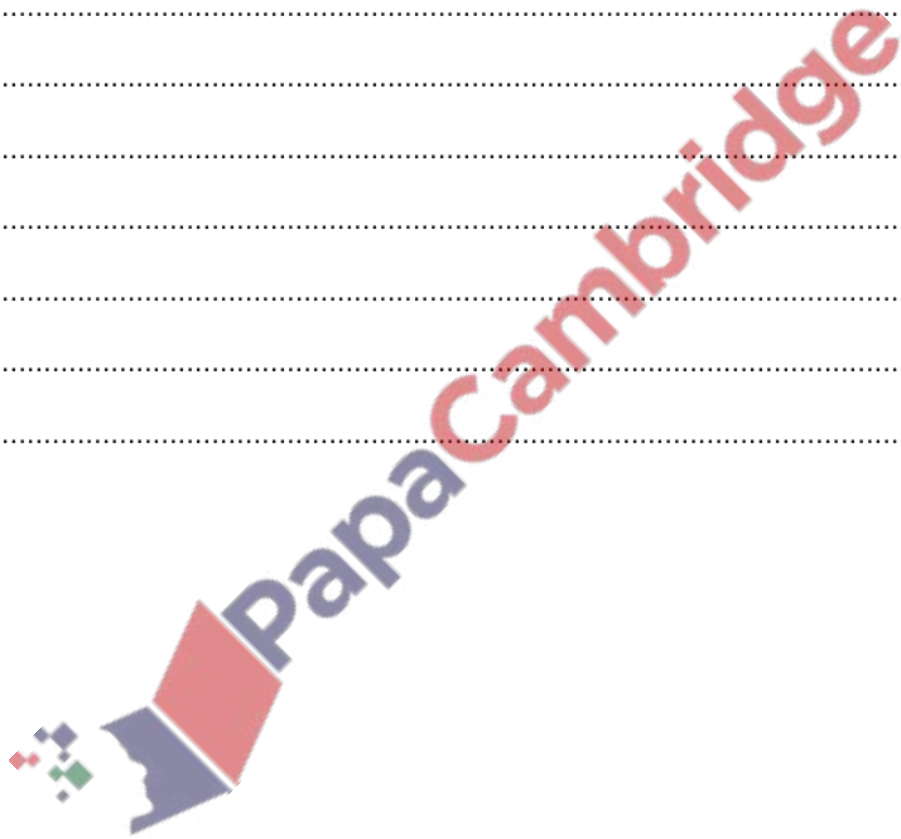
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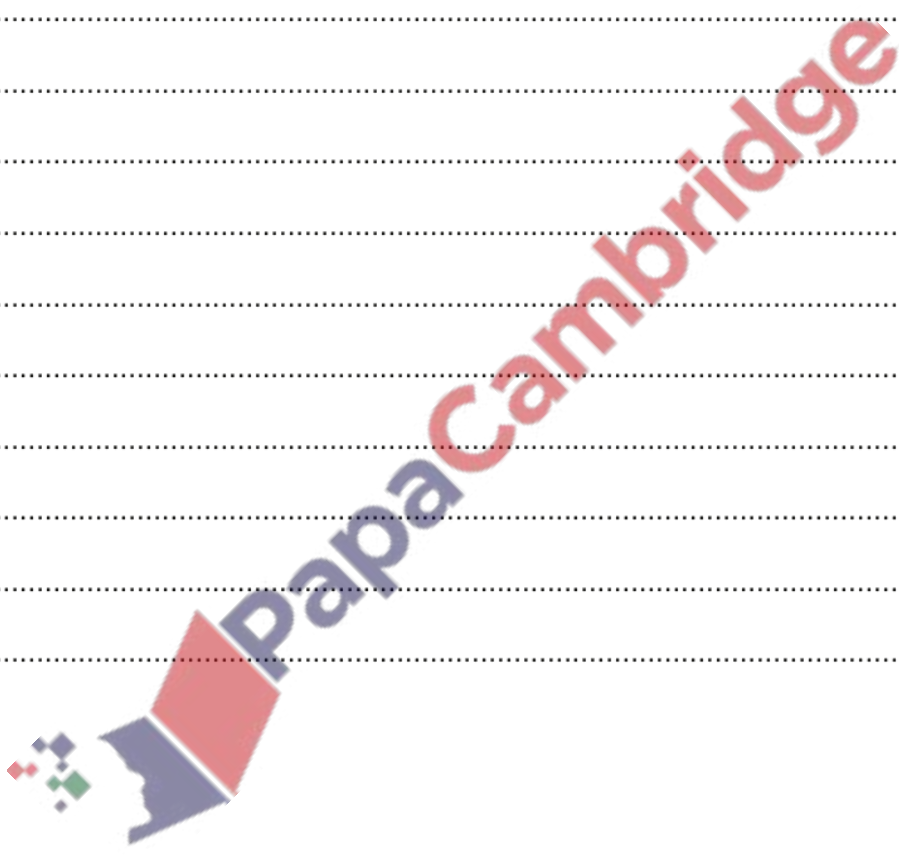


6. Nov/2021/Paper_12/No.5

A company is investigating converting its paper files into computer data files. The company must choose between its existing staff entering the data manually or using an Optical Character Reader (OCR).

Evaluate, by weighing up the advantages and disadvantages, the use of an OCR compared to manual data entry.

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(a) Tick the most accurate statement referring to software.

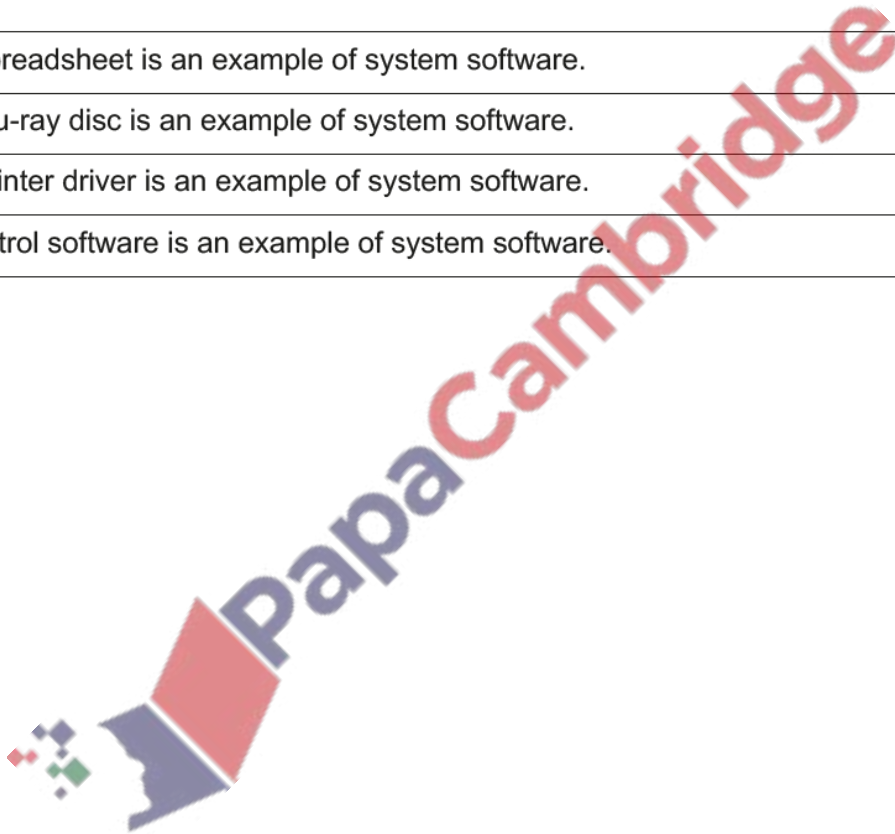
	✓
An operating system is an example of application software.	
Software consists of data or computer instructions.	
Software consists of RAM and ROM chips.	
A buffer is an example of application software.	

[1]

(b) Tick the most accurate statement referring to system software.

	✓
A spreadsheet is an example of system software.	
A blu-ray disc is an example of system software.	
A printer driver is an example of system software.	
Control software is an example of system software.	

[1]

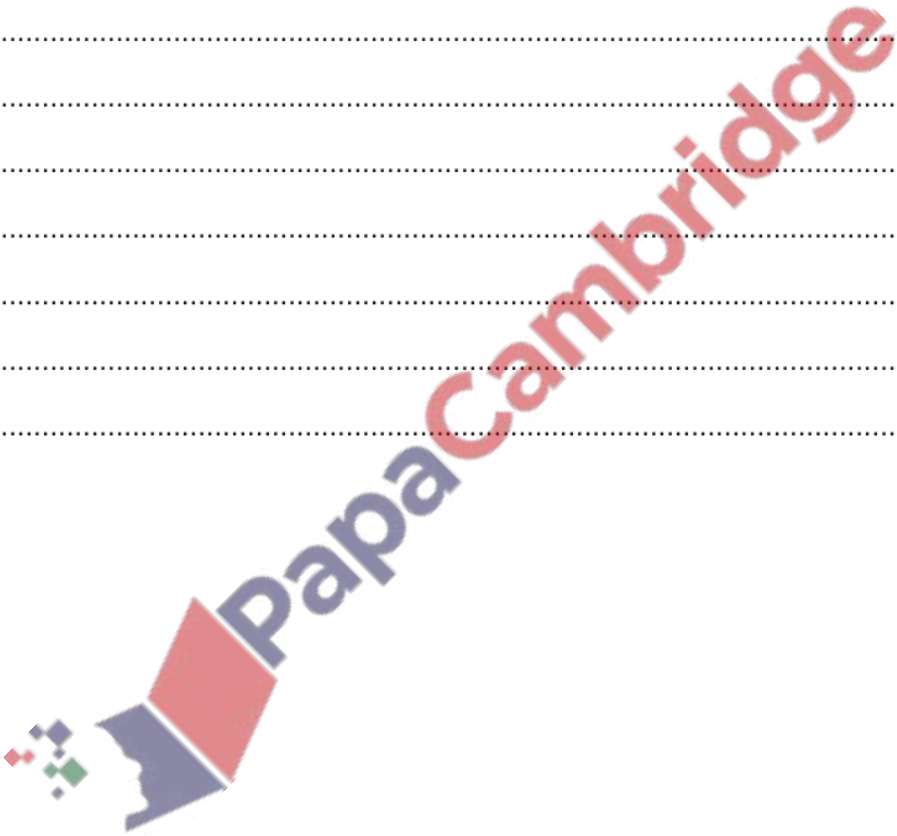


(c) A company stores all its sales records in a spreadsheet.

Discuss the benefits and drawbacks of using a spreadsheet for this purpose.

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9. Nov/2021/Paper_13/No.8

After a program is written in a high-level programming language, it has to be converted into a lower level of language.

Evaluate, by weighing up the advantages and disadvantages, the use of an interpreter for this purpose.

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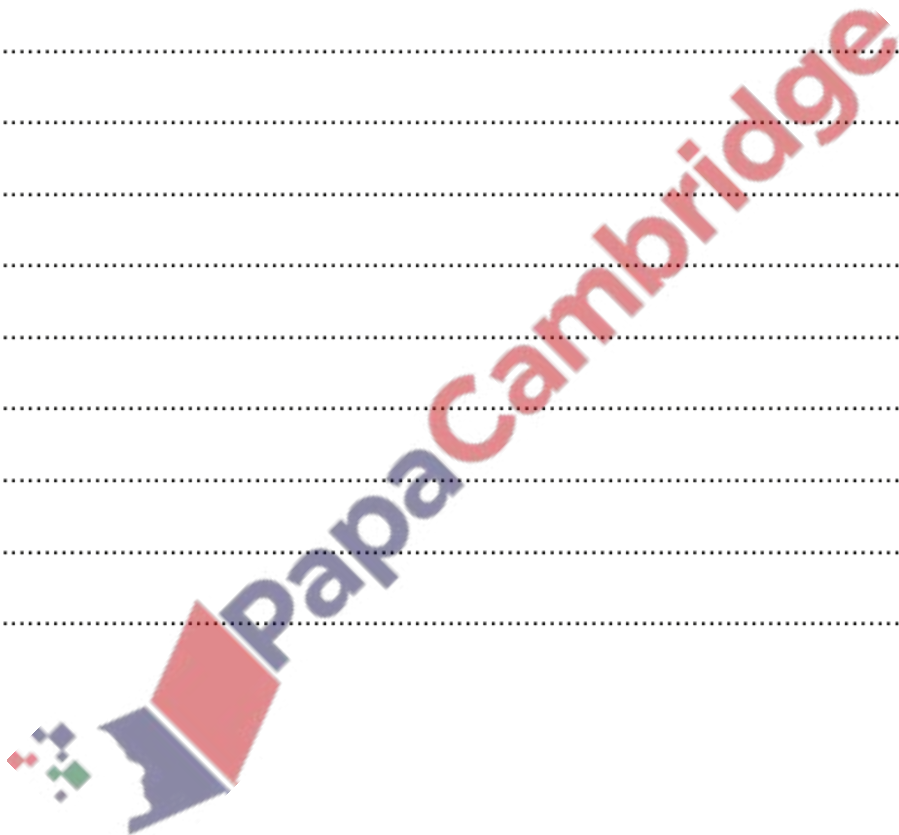
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[6]

There are many internal hardware devices in a typical personal computer.

(a) Tick the most accurate statement referring to hardware.

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There are two types of hardware: application hardware and system hardware.	
Hardware consists of the programs used to direct the operation of a computer.	
Hardware is the collection of physical components that constitute a computer system.	
A device driver is an example of an item of hardware.	

[1]

(b) RAM is an example of an item of internal hardware.

Tick the most accurate statement referring to RAM.

	✓
A hard disk drive allows quicker access to data than RAM.	
RAM is portable and very easy to move from device to device.	
RAM stores active program data.	
Per unit of memory, RAM is far cheaper to buy than a hard disk drive.	

[1]

(c) (i) Describe the components of the central processing unit and describe their function.

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(ii) A computer contains a number of internal hardware components.

Describe the following:

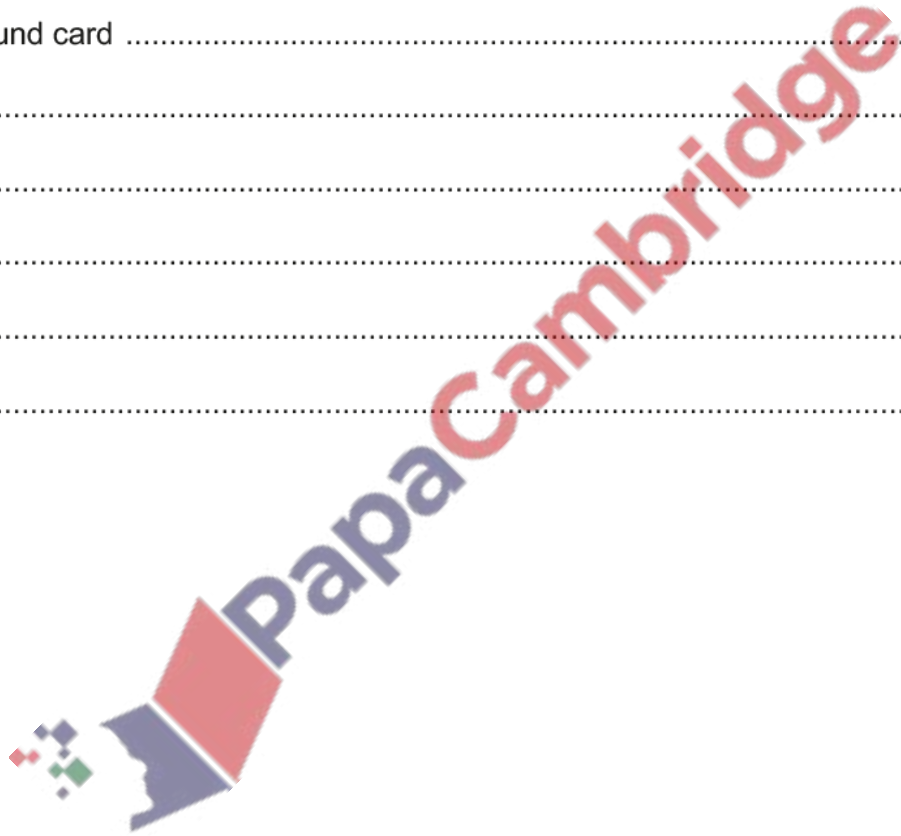
Motherboard

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Sound card

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[4]



(a) Tick the most accurate statement referring to a gesture-based interface.

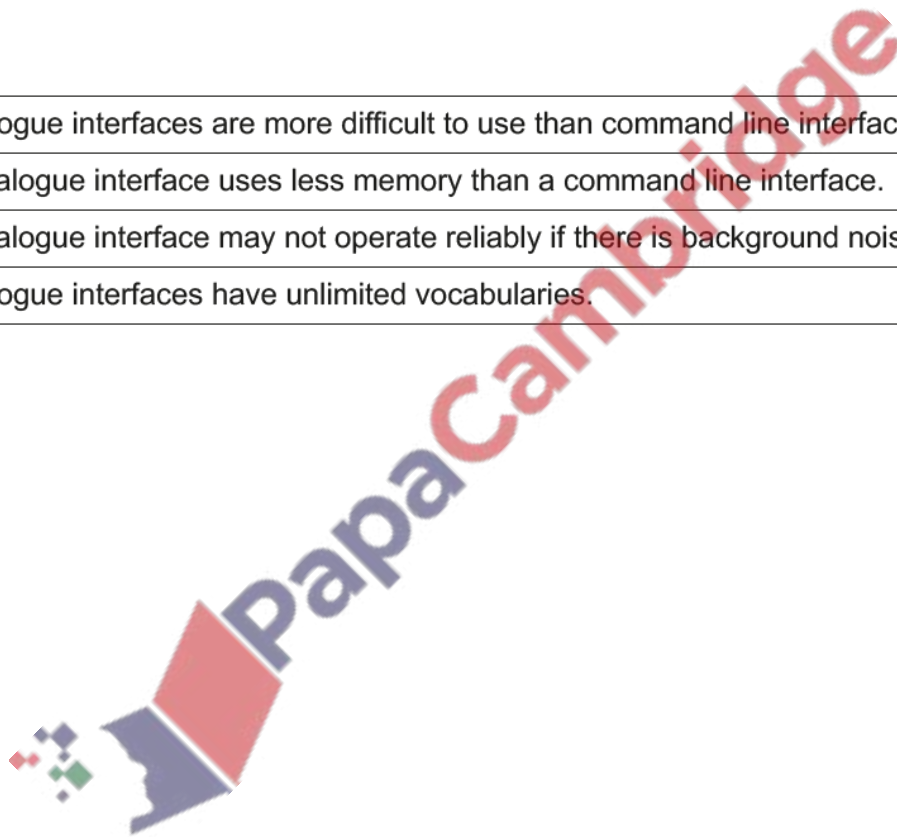
	✓
It is easier for users with physical disabilities to use a keyboard or mouse than make gestures.	
It is easier to enter text with a gesture-based interface than with a command line interface.	
Gestures are more accurately interpreted than mouse clicks.	
Some gestures may be unintentional but still initiate a reaction from the device.	

[1]

(b) Tick the most accurate statement referring to a dialogue interface.

	✓
Dialogue interfaces are more difficult to use than command line interfaces.	
A dialogue interface uses less memory than a command line interface.	
A dialogue interface may not operate reliably if there is background noise.	
Dialogue interfaces have unlimited vocabularies.	

[1]

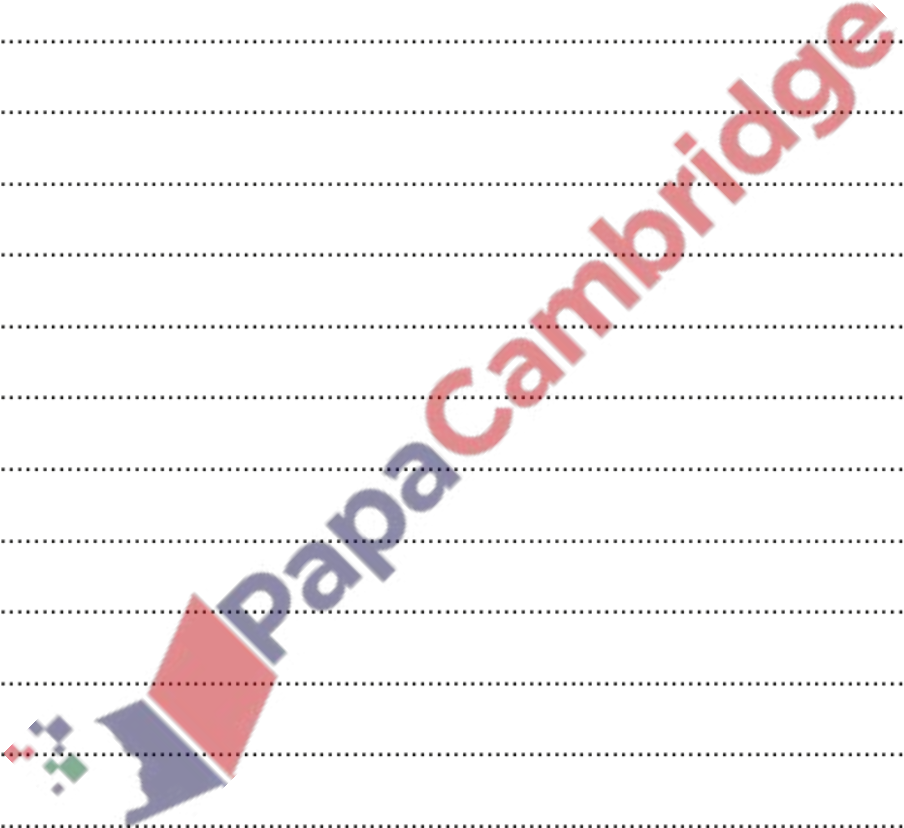


13. June/2021/Paper_11/No.3

Financial reports can be produced using word processing software or spreadsheet software.

Compare and contrast the use of these two pieces of application software for this purpose.

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[8]

Many computer users use a hard disk drive to store their data and use the cloud to back up this data.

(a) Tick the most accurate statement referring to the cloud.

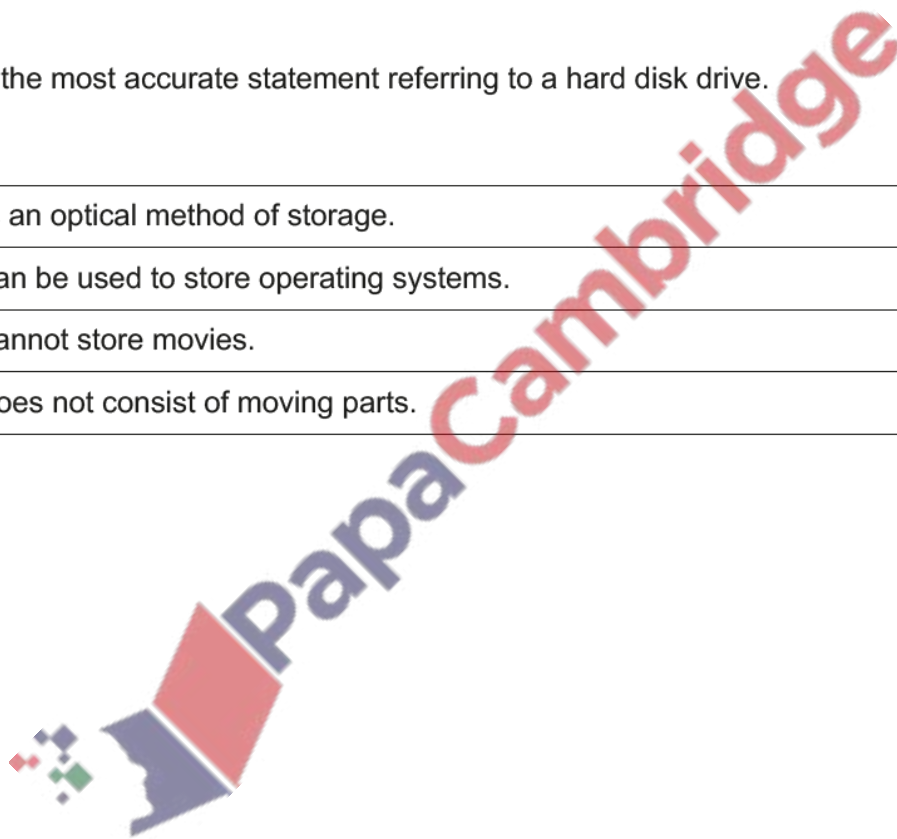
	✓
It is a cheaper method than any other form of storage.	
Data is more secure than when stored using any other form of storage.	
Users have an unlimited amount of free storage.	
You can store data wherever you are, as long as there is an internet connection.	

[1]

(b) Tick the most accurate statement referring to a hard disk drive.

	✓
It is an optical method of storage.	
It can be used to store operating systems.	
It cannot store movies.	
It does not consist of moving parts.	

[1]



15. June/2021/Paper_13/No.3

Explain how the following tasks are carried out using utility software:

(a) data compression

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(b) disk formatting

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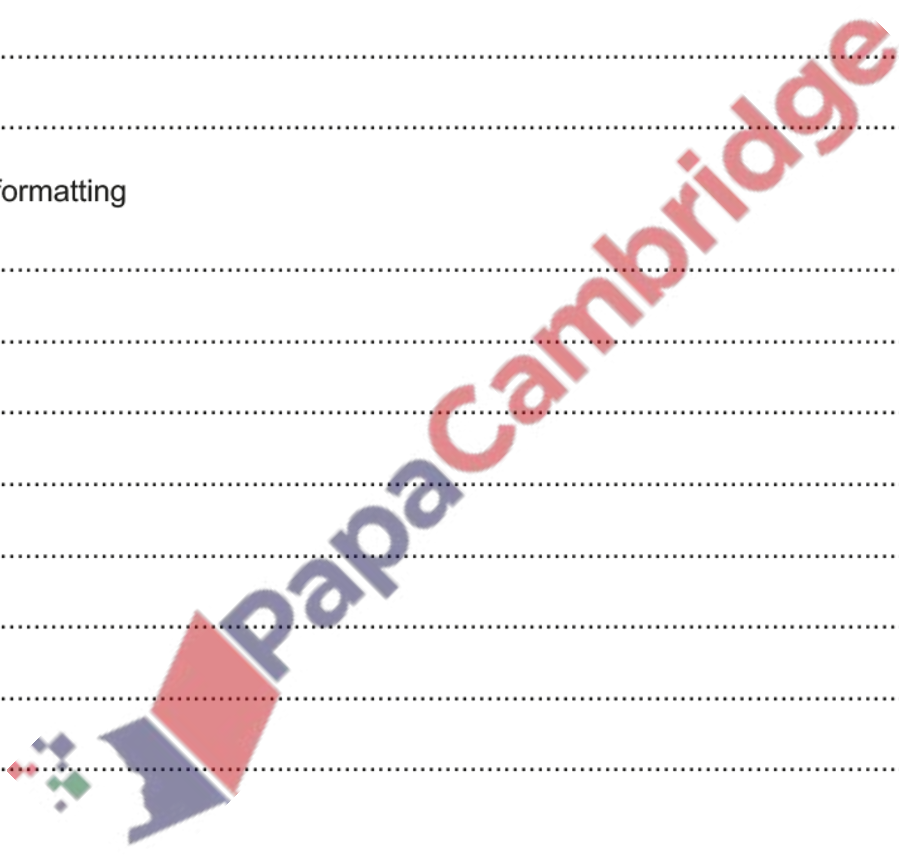
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(c) file deletion.

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16. Nov/2020/Paper_11/No.1

(a) Tick the most accurate statement regarding input devices.

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A touch screen is easier to use than a keyboard for inputting large amounts of text	
Using a keyboard is the most efficient method of moving a file from one folder to another	
A scanner is an input device used for inputting hard copy documents	
A motor is an input device used for inputting physical variables in a control system	

[1]

(b) Tick the most accurate statement regarding output devices.

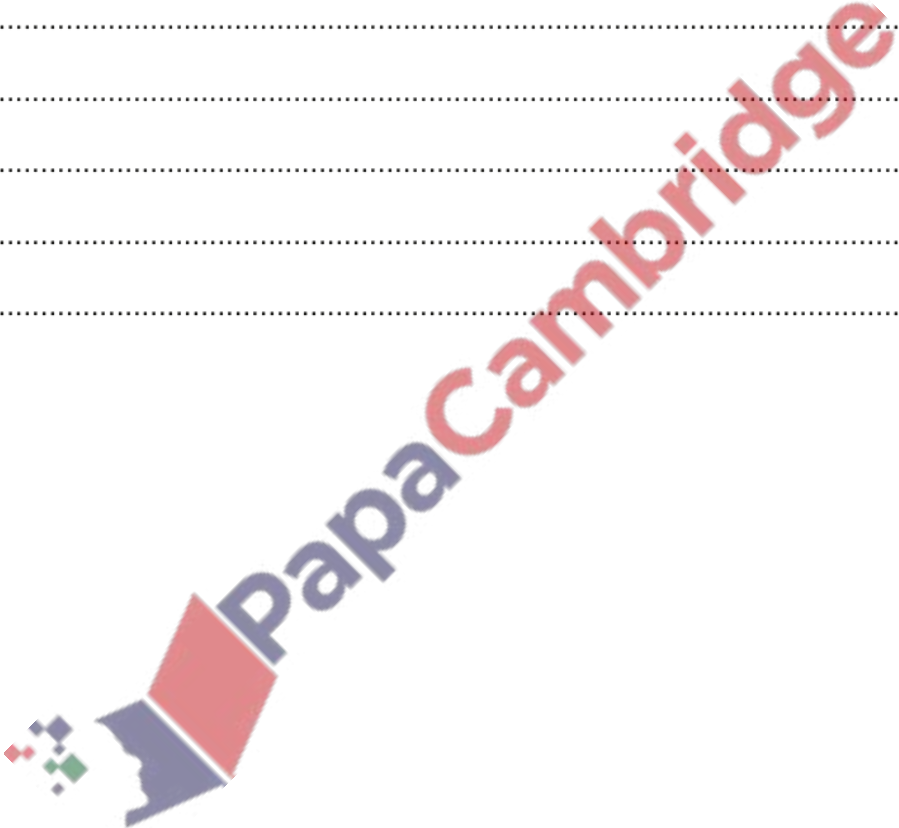
	✓
A sensor is an output device used as an actuator in a control system	
A dot matrix printer is the quickest printer for outputting large amounts of text	
A webcam is an output device used to display moving images	
An inkjet printer can be used to output high-quality photographs	

[1]

(c) Hard disk drives, magnetic tape drives and solid-state drives (SSD) are often referred to as secondary storage devices whereas RAM and ROM are often referred to as primary storage devices.

Explain why computers need secondary storage devices.

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(a) Tick the statement which most accurately refers to the results of using utility software.

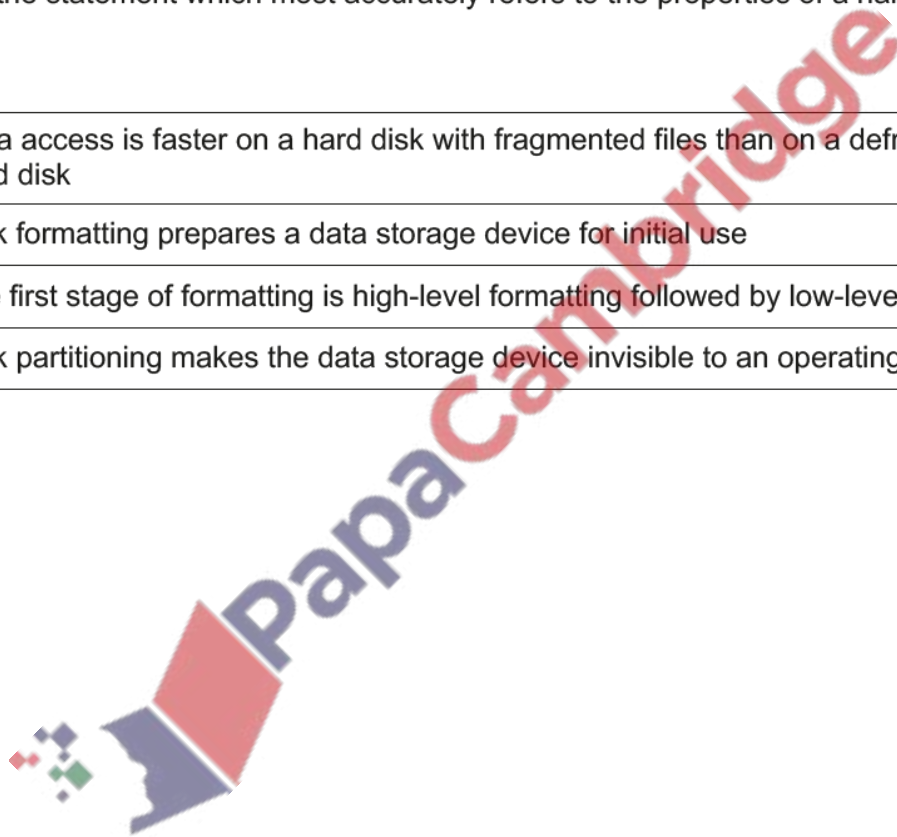
	✓
Lossless compression reduces the number of bits by increasing redundant data	
Some information is lost in lossless compression	
Lossy compression reduces the number of bits by identifying unnecessary information and removing it	
Disk defragmentation organises the contents of the disk into the largest number of contiguous regions	

[1]

(b) Tick the statement which most accurately refers to the properties of a hard disk.

	✓
Data access is faster on a hard disk with fragmented files than on a defragmented hard disk	
Disk formatting prepares a data storage device for initial use	
The first stage of formatting is high-level formatting followed by low-level formatting	
Disk partitioning makes the data storage device invisible to an operating system	

[1]



19. Nov/2020/Paper_11/No.8

Describe the differences between a compiler and an interpreter.

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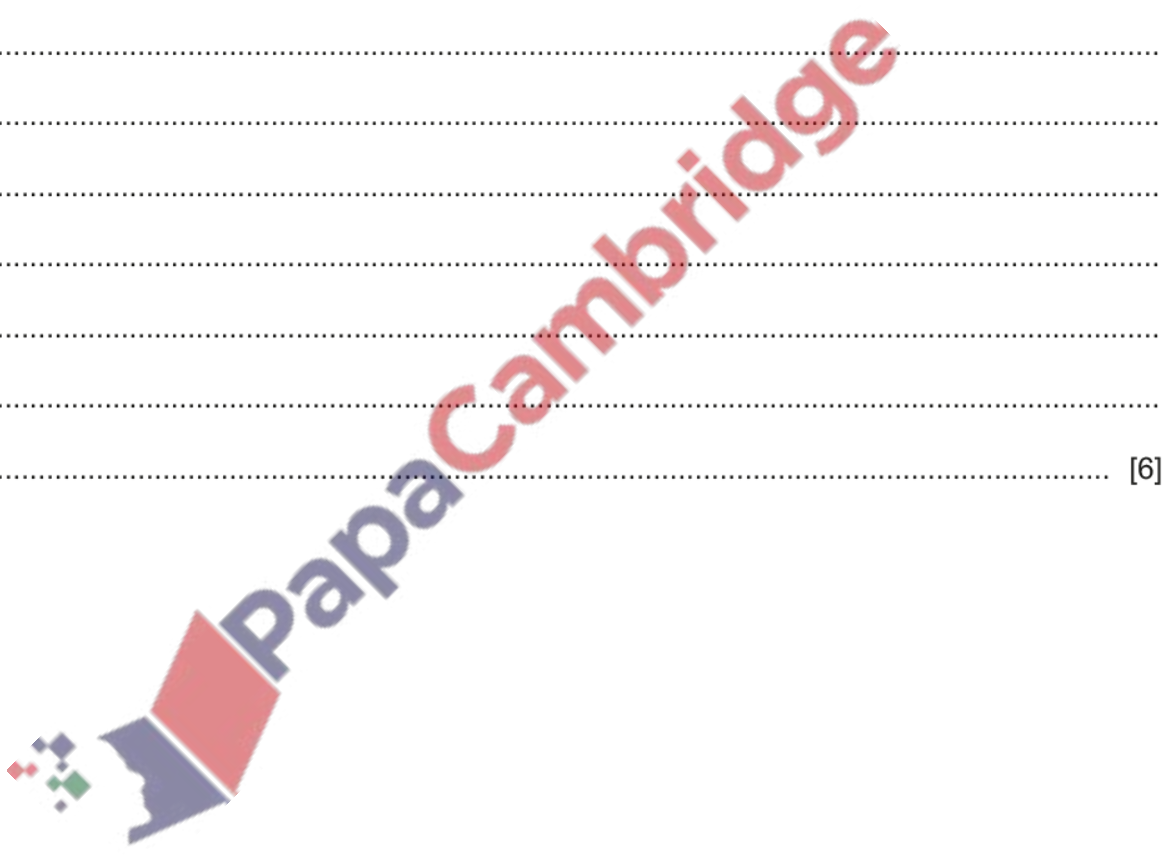
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[6]

When a person buys a PC it comes with a variety of hardware and software.

(a) Define the term software.

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(b) Explain why the two types of software are needed by a PC user.

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(a) Tick the most accurate statement regarding input devices.

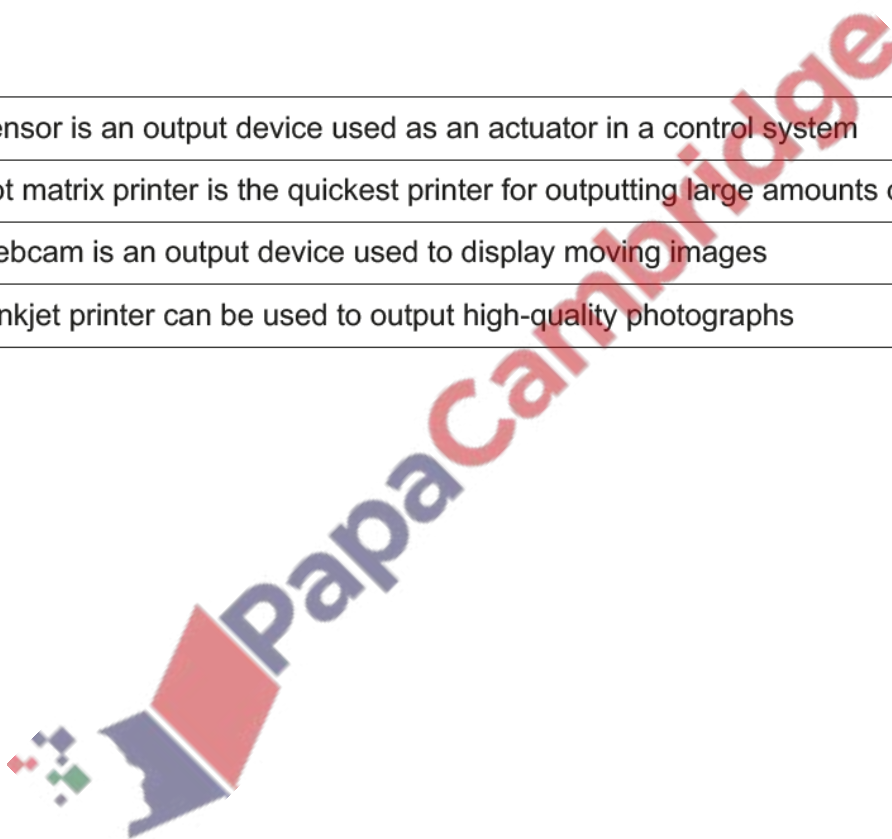
	✓
A touch screen is easier to use than a keyboard for inputting large amounts of text	
Using a keyboard is the most efficient method of moving a file from one folder to another	
A scanner is an input device used for inputting hard copy documents	
A motor is an input device used for inputting physical variables in a control system	

[1]

(b) Tick the most accurate statement regarding output devices.

	✓
A sensor is an output device used as an actuator in a control system	
A dot matrix printer is the quickest printer for outputting large amounts of text	
A webcam is an output device used to display moving images	
An inkjet printer can be used to output high-quality photographs	

[1]



(c) Hard disk drives, magnetic tape drives and solid-state drives (SSD) are often referred to as secondary storage devices whereas RAM and ROM are often referred to as primary storage devices.

Explain why computers need secondary storage devices.

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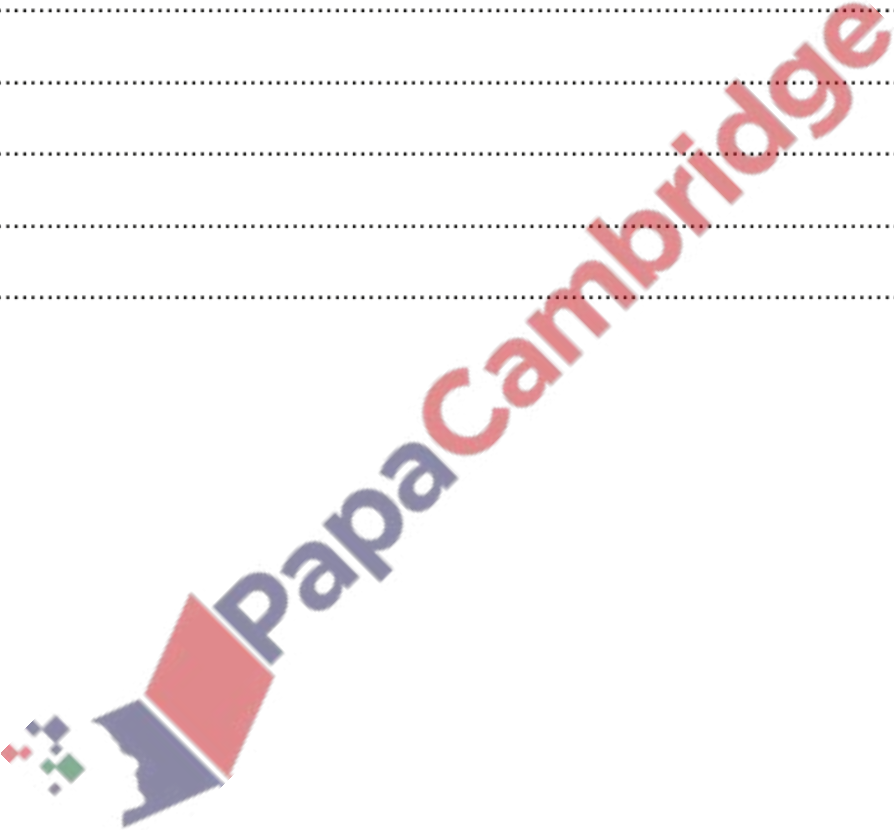
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(a) Tick the statement which most accurately refers to the results of using utility software.

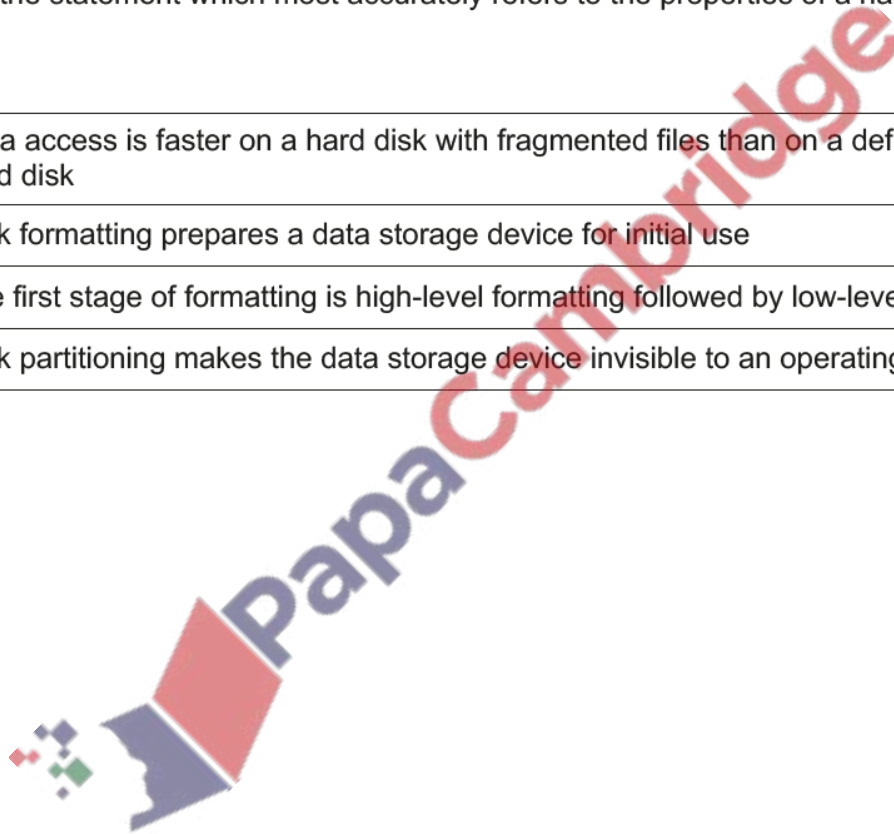
	✓
Lossless compression reduces the number of bits by increasing redundant data	
Some information is lost in lossless compression	
Lossy compression reduces the number of bits by identifying unnecessary information and removing it	
Disk defragmentation organises the contents of the disk into the largest number of contiguous regions	

[1]

(b) Tick the statement which most accurately refers to the properties of a hard disk.

	✓
Data access is faster on a hard disk with fragmented files than on a defragmented hard disk	
Disk formatting prepares a data storage device for initial use	
The first stage of formatting is high-level formatting followed by low-level formatting	
Disk partitioning makes the data storage device invisible to an operating system	

[1]



(c) A type of utility software enables files to be deleted.

Explain how the delete utility works and how files can be recovered even after they appear to have been deleted.

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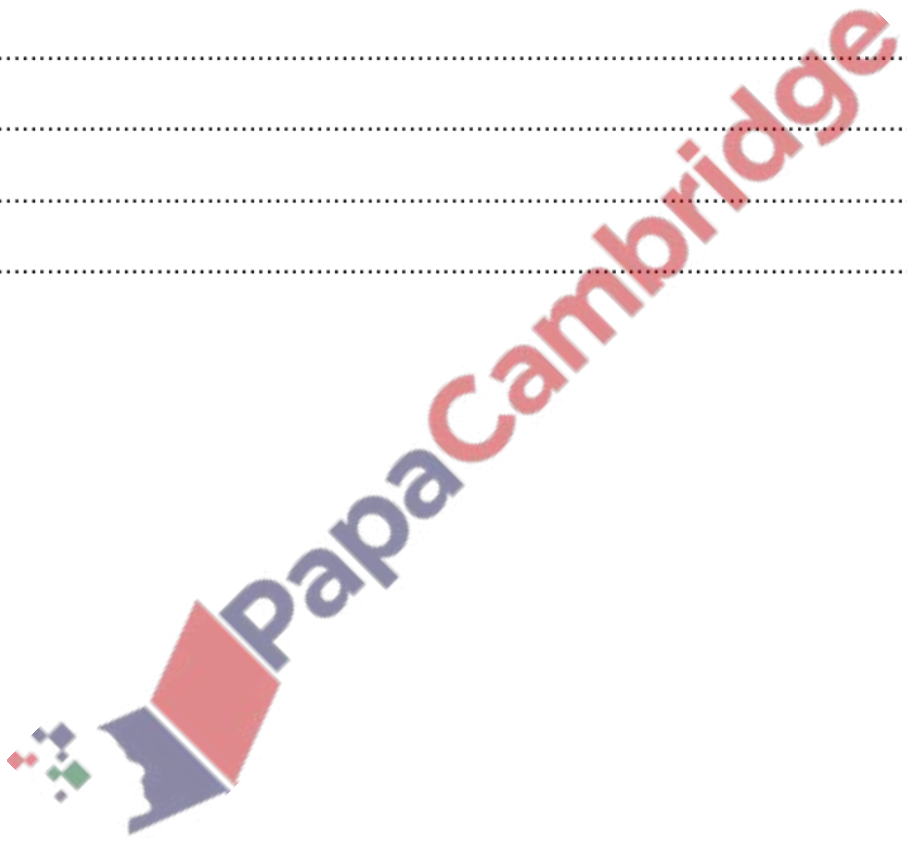
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25. Nov/2020/Paper_12/No.8

Describe the differences between a compiler and an interpreter.

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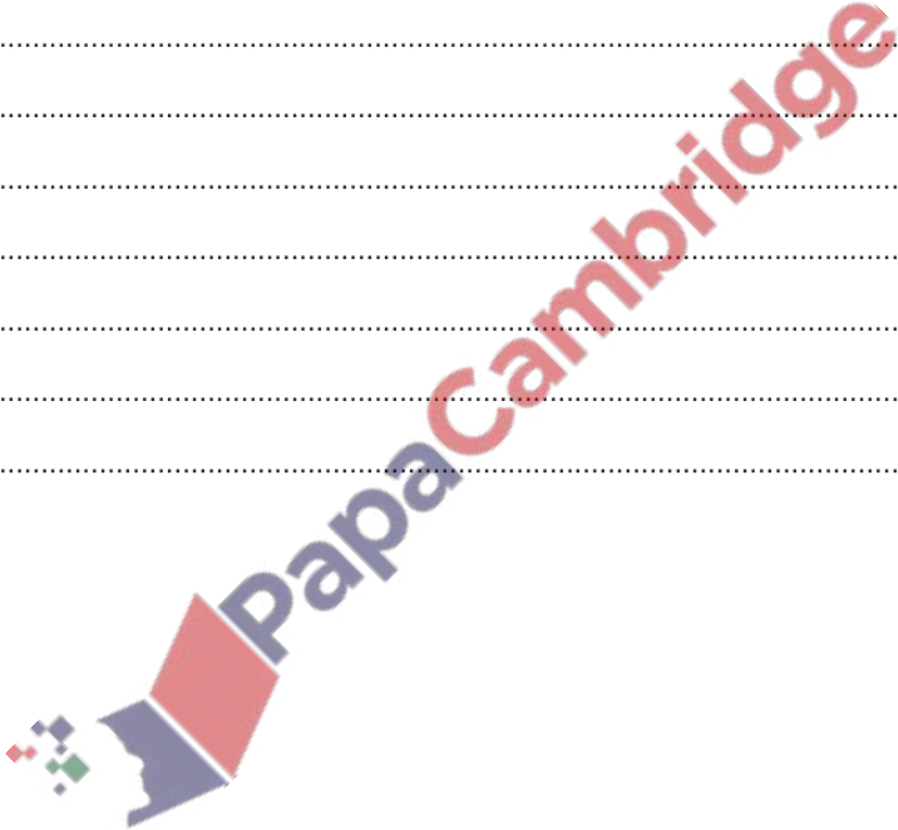
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26. Mar/2020/Paper_13/No.3

Pardeep has a lot of confidential data on her desktop computer which she wishes to transfer to a backing storage device. She is not sure whether to buy an extra hard disk drive or a magnetic tape drive.

Evaluate, by weighing up the advantages and disadvantages, the use of a hard disk drive compared with a magnetic tape drive.

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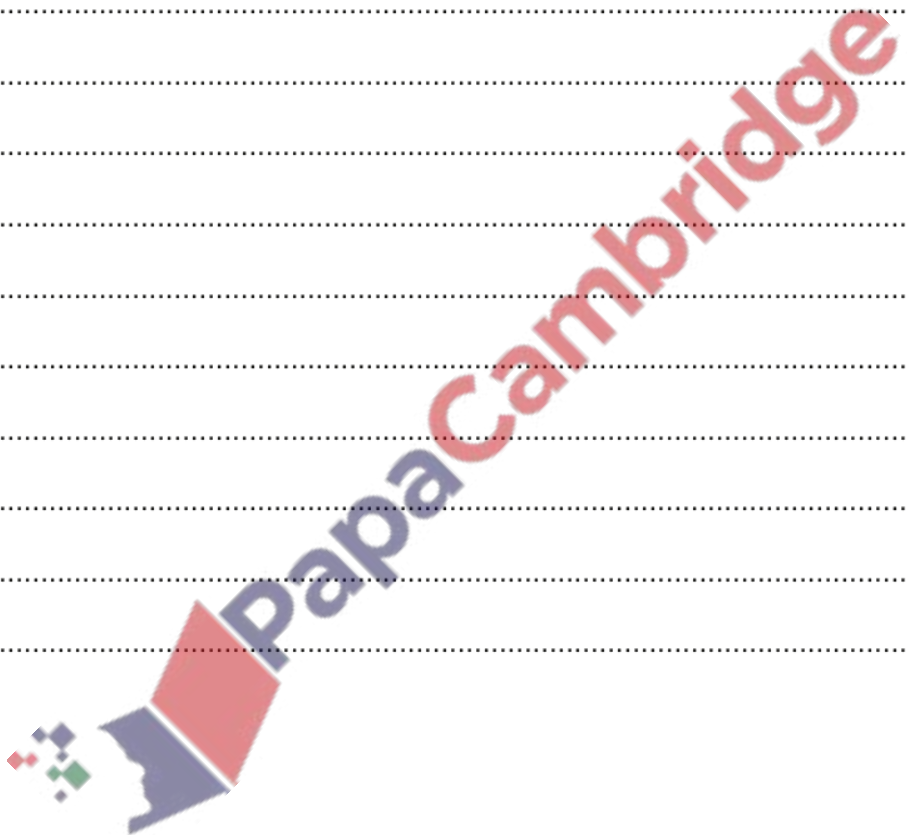
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[6]

(a) Tick the most accurate statement referring to the use of compilers and interpreters.

	✓
An interpreter creates a single executable file that runs directly on the CPU	
It is easier to debug compiled code rather than interpreted code	
With a compiler it is harder to protect intellectual property as machine code is easy to understand	
It is more difficult for hackers to modify compiled code	

[1]

(b) Tick the most accurate statement referring to the use of disk formatting.

	✓
Disk formatting increases the number of fragments in a hard disk	
Disk formatting never removes viruses from a hard disk	
Disk formatting increases the storage capacity of a blank disk	
Disk formatting is used to fully prepare a hard disk for initial use	

[1]

30. June/2020/Paper_12/No.2

(a) Tick the most accurate statement regarding the use of word processing software for producing documents.

	✓
It is easier to format paragraphs compared to database software	
It is easier to manipulate statistics compared to using spreadsheet software	
Word processing packages can be used to produce all multimedia features of a website	
Databases are more difficult to filter than word processed documents	

[1]

(b) Tick the most accurate statement regarding the use of other software to manipulate data.

	✓
It is easier to create a query using database software rather than using spreadsheet software	
It is easier to create a report using spreadsheet software rather than using database software	
It is harder to enter data and produce charts showing sales growth with a spreadsheet than using video editing software	
The easiest way to trim a sound sample is by using photo editing software	

[1]

(c) Evaluate, by weighing up the advantages and disadvantages, the use of a web authoring package rather than a text editor to create a web page.

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34. June/2020/Paper_13/No.7

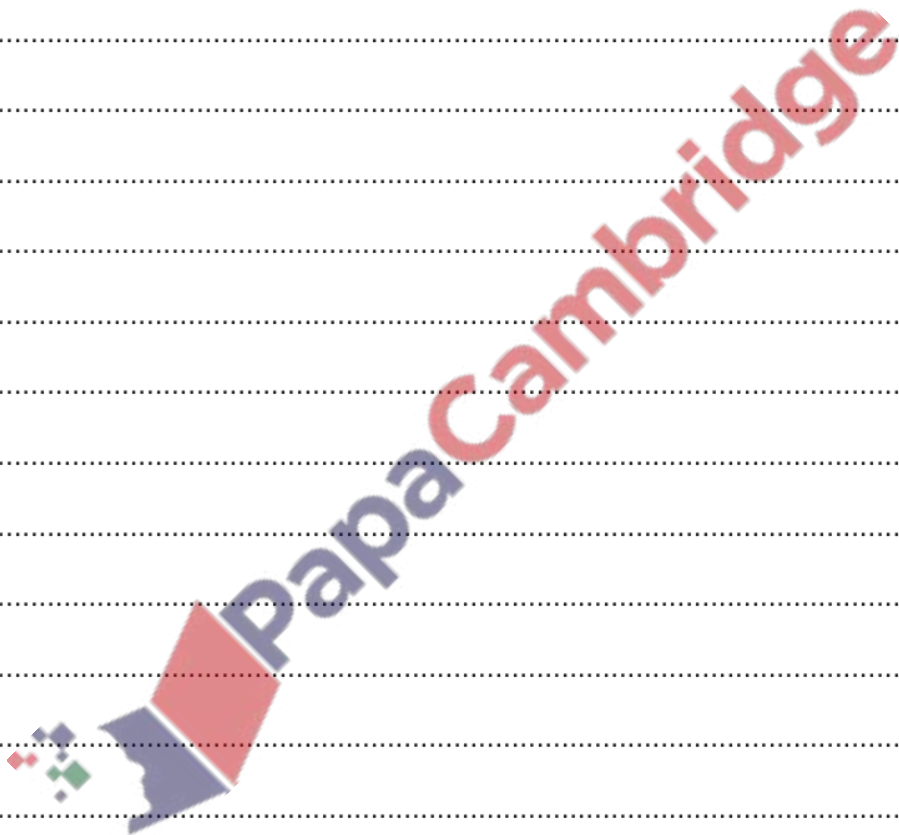
A program written in a simple high level programming language has a mistake in it.

Line 20 should say LET A = X + Y, but the program was typed as:

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10 INPUT X, Y
20 LE A = X + Y
30 PRINT X, " + ", Y, " = ", A
40 END
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Describe the **two** ways the program, including the error, could be translated so that it runs on a computer.

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