1. Complete the following sentences, using items from the list below.

Applications	**A bar code reader**	**A compiler**	**A CPU**	**Hardware**
A monitor	**A printer**	**A scanner**	**System**	**USB**

(a) .... software is designed to manage computer hardware. [1]

(b) .... software examples include word processing and spreadsheets. [1]

(c) .... produces output in the form of hard copy. [1]

(d) .... converts high-level language programs into machine code. [1]

2. This diagram shows a laptop computer being used in a measuring experiment.
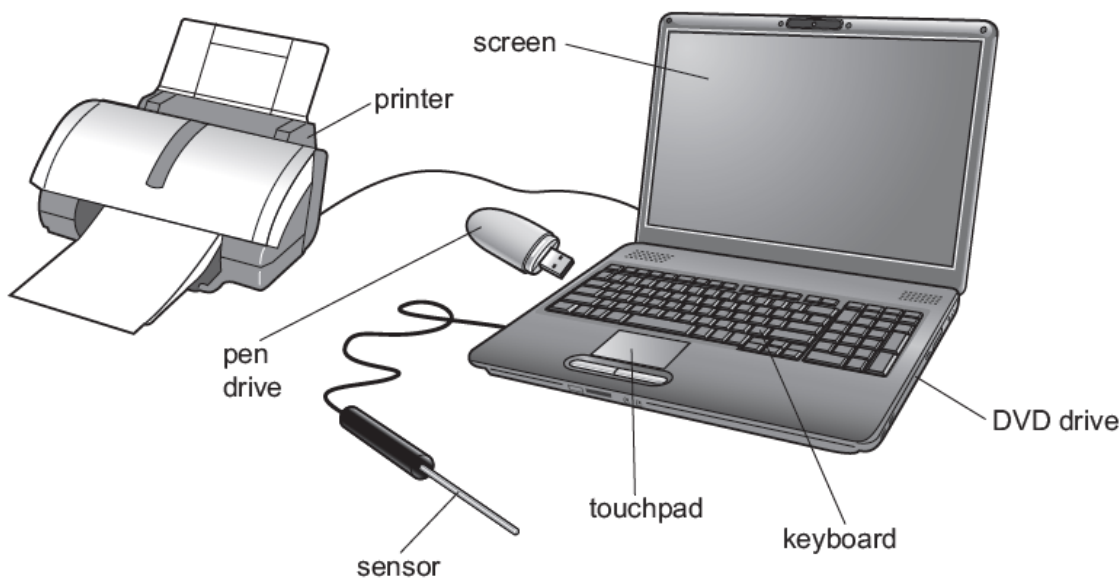
(a) Apart from the keyboard, name **two** input devices shown in the diagram above.

1..

2.. [2]

(b) Name **two** output devices shown in the diagram above.

1..

2.. [2]

(c) Name **two** storage devices shown in the diagram above.

1..

2.. [2]

3.   Joanne runs a large company. Her computer network has a large capacity server. She is investigating ways of backing up the data on the server.

(a)   Describe what is meant by a backup.

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....[2]

(b)   Joanne has to choose between using magnetic disc or magnetic tapes to make her backups. Discuss the advantages and disadvantages of using each of these media.

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....[6]

4. **15** Many computer networks are connected using cables but some are now connected using wireless technology.

Discuss the advantages and disadvantages of using wireless networks compared to using cabled networks.

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.... [6]

5. Robotic systems are now widely used in the production of cars.

Describe the effects this has had on job roles and working conditions in a car production factory.

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.... [6]

6. A ferry connects two countries. When car drivers approach the ferry they have to check in to confirm the details they have already booked. If they drive in to the self check-in lane, details of the car are automatically input to a computer. The terminal which is used for the driver to identify themselves produces a personalised welcome message on a screen. There is a database which contains details of the driver and the car.

(a) Write down the data which is automatically input to the computer.

....

.... [1]

(b) Other than your answer to (a) give **two** items of data stored in the computer database.

1 ....

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2 ....

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[2]

(c) Explain how Optical Character Recognition is used before the computer processes the data.

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.... [2]

(d) Explain the computer processing which takes place to produce the personalised message.

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.... [3]

7. A health authority is planning to centralise its medical booking system. This will allow all medical bookings such as doctors' appointments and hospital appointments to be made online.

The health authority is considering whether to implement the system using Pilot Running or Direct Changeover.

(a) Discuss the advantages and disadvantages of implementing this system using these methods. Include in your answer the method you think the health authority should use, giving a reason for your choice.

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.... [7]

(b) The health authority has implemented the system and it is now in full use. Evaluation now needs to take place.

For each of the following, identify **two** questions that could be asked in order to evaluate the new system.

Efficiency ....

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Ease of use ....

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Appropriateness ....

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.... [6]

8. A number of schools in a big town have Local Area Networks /LANs in their buildings. Each pupil in a school using a LAN can access the same software and can save their work.

(a) Give **two** ways that pupils can prevent the work they save from being copied by other pupils.

1 ....

....

2 ....

....[2]

(b) The schools want to connect their LANs into a large Wide Area Network. They will probably use a modem to do this.

Explain why this device is needed.

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....[2]

(c) When the WAN is set up the schools' pupils will be able to communicate with each other using a number of ways. Give **two** examples of these ways of communicating.

1 ....

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2 ....

....[2]

(d) The headteachers of the schools will want to send confidential data to each other. Identify a method which will prevent hackers from understanding the data.

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....[1]