

1 Output devices are used to output data from a computer.

Circle **three** devices that are output devices.

- actuator
- digital versatile disk (DVD)
- keyboard
- microphone
- mouse
- printer
- scanner
- sensor
- solid-state drive (SSD)
- speaker

[3]

1 The size of a file can be measured in different units.

(a) State how many bits there are in a byte.

..... [1]

(b) State how many kibibytes (KiB) there are in 2 mebibytes (MiB).

..... [1]

(c) Identify the unit of data that is equal to 4 bits.

..... [1]

2 An image has a 16-bit colour depth and a resolution of 1000 × 1750 pixels.

(a) State what is meant by a 16-bit colour depth.

.....  
..... [1]

(b) The resolution of the image is changed to 750 × 1500 pixels.

Give the effect this will have on the file size of the image.

.....  
..... [1]

1 The size of a file can be measured using different data storage units.

(a) Tick (✓) **one** box to show the smallest data storage unit.

- A

byte

☐
- B

gibibyte (GiB)

☐
- C

kibibyte (KiB)

☐
- D

nibble

☐

[1]

(b) State how many tebibytes (TiB) are equal to 2 pebibytes (PiB).

..... [1]

Working space

.....  
.....  
.....

(c) The size of a file needs to be reduced.

(i) Give the name of the process that is used to reduce the size of a file.

..... [1]

(ii) One reason the size of a file may need reducing is so that it has a shorter transmission time.

Give **one** other reason why the size of a file may need reducing.

.....  
..... [1]

3 An image is converted to binary to be represented by a computer.

Complete the table with the missing terms and definition about representing an image.

| Term       | Definition                                                                                                                       |
|------------|----------------------------------------------------------------------------------------------------------------------------------|
| .....      | This is the smallest component of an image.                                                                                      |
| resolution | .....<br>.....<br>.....                                                                                                          |
| .....      | This is the number of bits used to create each colour in an image.                                                               |
| .....      | This is additional data that is stored with an image that can provide information such as the time and date the image was taken. |

[4]

2 Hypertext markup language (HTML) colour codes can be represented as hexadecimal.

(a) Tick (✓) **one** box to show which statement about the hexadecimal number system is incorrect.

- A

It uses the values 0 to 9 and A to F.

☐
- B

It can be used as a shorter representation of binary.

☐
- C

It is a base 10 system.

☐
- D

It can be used to represent error codes.

☐

[1]

(b) Denary numbers can be converted to hexadecimal.

Convert the **three** denary numbers to hexadecimal.

- 20 .....
- 32 .....
- 165 .....

[3]

Working space

.....

.....

.....

.....