

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	
.....	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

.....

.....

.....

.....