Grade 10 Tutorial

Question 1
(a) State the appropriate term:
   (i)   a device to enter data and instructions into the computer.   [1]
   (ii) a device to send result of processing to the user.   [1]

(b) A supermarket has a number of point of sale (POS) terminals. State **two** input devices and **one** output device that would be found at each POS terminal, describing what they are used for.   [6]

Question 2
Name the appropriate device for each of the following description.

(a) It copies paper documents and converts the text and pictures into a computer-readable form.
(b) It reads labels containing parallel dark and light lines using laser light or LEDs; the width of each line represents a binary code.
(c) It allows audio signals to be converted into electric signals; these can be interpreted by a computer after being converted into digital form
(d) It is a high powered laser that cuts materials such as thin metals or wood.
(e) The screen is made up of blocks of red, green and blue pixels. The screen uses layers of different types of liquid.
(f) It is responsible for powering and moving a motor in machinery, such as a robot arm in a factory.   [6]

Question 3
A pocket sized game system is based around a microprocessor.
(a) State an input device which would be suitable for use in this application. Justify your choice.   [2]
(b) State an output device which would be suitable for use in this application. Justify your choice.   [2]

Question 4
A printer is a hard copy output device. State **three** different types of printer. For each of your choices give an example of an application where it would be used, justifying your choice.   [9]

Question 5

An advertisement in a magazine displays this barcode

(a) Identify this type of barcode. [1]

(b) Explain how the data stored in this barcode is read. [4]

Question 6

(a) Sensors are one type of input device. For each of the following situations, name a different sensor that could be used.
(i) air conditioning in an office building [1]
(ii) maintaining correct growing conditions in a greenhouse [1]
(iii) detecting an intruder in a building [1]
(iv) measuring the brightness of the environment [1]

(b) A security light is controlled by sensors and a microprocessor. Describe how the sensors and microprocessor interact to switch on the security light when an intruder is detected. [6]

Question 7

A supermarket uses a barcode scanner to read the barcodes on its products.
(a) Describe how the barcode scanner reads the barcode. [4]

(b) Explain how the barcode system could help the supermarket manage its stock. [3]

(c) An infrared touch screen is used to view and navigate the supermarket stock system. Explain how the infrared touch screen detects a user's touch. [4]