TASK 1

Read the texts below. Match choices (A-H) to (1-5). There are three choices you do not need to use. Write your answers on the separate answer sheet.

THE DISCOVERIES THAT WILL SHAPE THE FUTURE

1 .....
Just when you thought it was impossible to pack any more features into a smartphone, along come transparent sensors that can measure blood sugar levels, take your temperature and even analyse DNA. Researchers in Montreal have developed a laser-writing technique that can be used to embed layers of sensors into glass.

2 .....
Lung cancer has one of the highest mortality rates of all cancers because it's so hard to detect. Enter the NaNose, a thing that can sniff out lung cancer. Tumours produce 'volatile organic compounds' (VOCs) and NaNose uses nanotechnology to detect VOCs in the breath. In tests, it differentiated between malignant and benign lesions four times out of five.

3 .....
The traditional system of using overlapping blades to control the amount of light reaching a camera's sensor has reached a physical limit: it can't get any smaller. But now a team at the University of Kaiserslautern has created a micro-iris that could give rise to a new generation of tiny cameras for use in smartphones and tablets. The device is just 55 micrometres thick and features rings of chemicals that become opaque when a small voltage is applied.

4 .....
Sometimes we humans can be pretty poor at reading the emotions of those around us. But help may be on the way. A team from Daejeon, South Korea, has developed a sensor that can be built into clothing, which detects fluctuations in electrical capacitance to spot changes in the size of goose bumps triggered by the wearer's emotions.

5 .....
The battery life of a pacemaker can be as short as five years, but now researchers in Korea have developed a device that can harness energy from the body's movements.

LIVEWORKSHEETS

The flexible piezoelectric nanogenerator could prolong the life of pacemakers and provide real-time heart monitoring. *[2]*

A. A sleeve for speed
B. Soft machines
C. A see-through sensor
D. A helping hand
E. A breathanalyser
F. Wear your heart on your sleeves
G. Keeping up
H. An eye-spy

LIVEWORKSHEETS