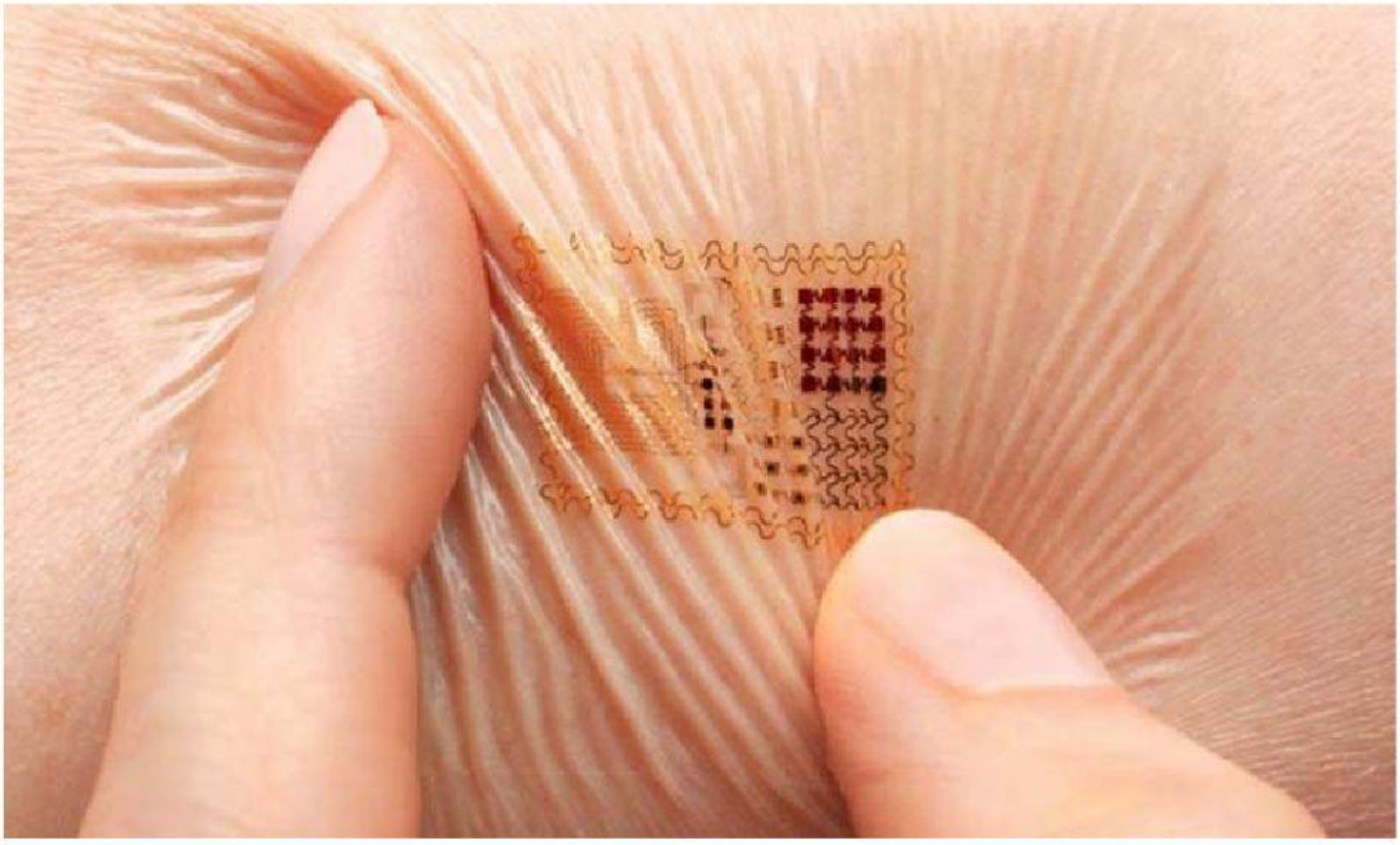
LEVEL II

# TECHNOLOGY FOR HUMANITY

UNIT 5 - Reading 3



## MEDICAL MARVELS

Medical science is usually at the **forefront** of technology because small advances can help cure diseases and save lives. The miniaturization of electronics means that computing devices may soon be working on or inside your body, and technology that takes control of the way a body grows will be able to replace body parts completely.

**Biostamp tattoo**

In the future, doctors **might** use biostamps to monitor a patient's health. The temporary tattoo is an ultrathin microchip that is waterproof and able to move with the skin. The chip will send data on things like activity levels, hydration, and blood pressure via a wireless transmitter, giving doctors a better picture of how the patient's body is working over a couple of weeks.

### SKILLS:

- Details
- Synonyms
- Main idea
- Language function
- Vocabulary in context

### GETTING STARTED

Mention some medical advances technology has brought.

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**Antivirus robots**
DNA carries our genetic code in a **precise** sequence of chemical units. If a virus or illness invades the body, future biomedical engineers may be able to program new nongenetic DNA molecules to be delivered to the affected parts of the body by tiny robots. The robots deliver their load and fix the problem before becoming harmless fragments.

**Synthetic skin**
A flexible plastic laced with silicon and gold is being developed as a touch-sensitive, synthetic skin. Tiny electronic sensors inside it can pick up pressure, heat, cold, and moisture, **thus** offering the same type of sensations the human skin can experience.

**Organ growing**
Researchers have learned how to grow extra kidneys inside lab rats, a process that could be scaled up to make it possible to grow new organs inside human bodies to replace damaged ones. The system requires special human body cells to be grown in the lab. These are implanted into an adult body, where they continue to grow into a new organ.

**Model patient**
SimMan is a robot patient used to teach nurses and doctors how to look after real people. Trainers can instruct it to speak, bleed, sweat, breathe in and out, urinate, and even cry. The robot can simulate the different ways patients need help from medical staff, giving them a valuable chance to practice without harming anyone if they get it wrong.

**Adapted from How Super Cool Tech Works. DK Publishing*

## Answer the following questions:

**1. What is stated about the use of technology in medicine?**

a. It may not be healthy to have little deices inside your body.
b. Even little technological developments can help fight medical issues.
c. Some body parts cannot be replaced even if technology is so advanced.
d. Medical devices won't be necessary if people control the way their bodies grow.

**2. The word forefront in paragraph 1 refers to**

a. being in a leading position
b. making some progress
c. being behind
d. facing some obstacles

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**3. What is the function of the word might in paragraph 2?**

a. Express certainty
b. Express probability
c. Express suggestion
d. Express impossibility

**4. What is stated about the biostamp tattoo in paragraph 2?**

a. It's a permanent device implanted into the body.
b. It requires some cables that transmit information.
c. It's very slim and can be washed.
d. It has been designed to be a static device.

**5. Which of the following words is not a synonym of the word precise (paragraph 3)?**

a. Correct
b. Accurate
c. Adequate
d. Enough

**6. According to paragraph 3, what happens to the antivirus robots in the end?**

a. They mix with DNA molecules.
b. They turn into dangerous fragments.
c. They become particles that don't affect the body.
d. They fight some virus and then explode inside the organism.

**7. The word thus in paragraph 4 is closest in meaning to**

a. or
b. but
c. due to
d. in this way

**8. What is stated about organ growing in paragraph 5?**

a. Apart from kidneys, it's likely that some other organs can be grown.
b. The new complete organ is implanted into the body successfully.
c. Special cells are designed in a lab and then inserted in the body.
d. The new organs are created in a laboratory out of rats' cells.

**9. What is something SimMan could NOT do according to paragraph 6?**

a. talk
b. inhale
c. yell
d. pee

**WHAT DO YOU THINK?**

How far should technology and medicine work together?

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