

# Nanotechnology in the UK: A Teenager's Guide

Nanotechnology · Practice Test · 20 Questions

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**1. What is the approximate size range of nanoparticles, often measured in nanometres (nm)?**

- A) 1 to 1000 nm
- B) 1000 to 1 million nm
- C) 1 to 10 nm
- D) 1000 to 100,000 nm

**2. Which UK university is renowned for its Centre for Advanced Materials and Nanotechnology research?**

- A) University of Cambridge
- B) University of Oxford
- C) Imperial College London
- D) University of Manchester

**3. In the UK, what is a common application of nanotechnology in everyday products like sunscreens?**

- A) To create a transparent protective layer
- B) To make the product brightly coloured
- C) To increase its weight
- D) To add a strong scent

**4. The UK government has invested in nanotechnology research through initiatives like the \_\_\_\_\_ National Nanotechnology Initiative.**

- A) UK
- B) EU
- C) Global
- D) US

**5. What UK-developed nanotechnology is being used to create self-cleaning surfaces for buildings and windows?**

- A) Titanium dioxide coatings
- B) Graphene films
- C) Silver nanoparticles
- D) Carbon nanotubes

**6. Which of these is NOT a typical area where nanotechnology is applied in the UK?**

- A) Medicine
- B) Food production
- C) Large-scale traditional manufacturing
- D) Electronics

**7. The University of \_\_\_\_\_ in the UK is a leading institution for graphene research, a Nobel Prize-winning nanotechnology.**

- A) Manchester
- B) Bristol
- C) Edinburgh
- D) Leeds

**8. Nanotechnology allows for the development of new materials that can be stronger and lighter. What is this often called in the UK context?**

- A) Advanced materials
- B) Heavy materials
- C) Standard materials
- D) Brittle materials

**9. What is a potential medical application of nanotechnology being explored in the UK, such as for targeted drug delivery?**

- A) Nanoparticles carrying drugs directly to cancer cells
- B) Making patients temporarily invisible
- C) Shrinking patients to a smaller size
- D) Creating artificial organs instantly

**10. The \_\_\_\_\_ Institute in the UK is a key player in developing nanotechnology for a range of applications.**

- A) National Physical Laboratory (NPL)
- B) Royal Society
- C) British Museum
- D) National Trust

**11. In the UK, nanotechnology is being used to improve the efficiency of \_\_\_\_\_ in renewable energy technologies.**

- A) Solar cells
- B) Coal power plants
- C) Wind turbines
- D) Nuclear reactors

**12. What is the primary challenge in handling and manufacturing with nanoparticles in the UK and globally?**

- A) Controlling their behaviour and potential health impacts
- B) Making them visible to the naked eye
- C) Finding enough of them
- D) Making them heavier

**13. Which of the following is a UK-based research council that funds nanotechnology projects?**

- A) UK Research and Innovation (UKRI)
- B) BBC
- C) National Lottery
- D) Channel 4

**14. In the UK, nanotechnology is being explored to create more durable and efficient \_\_\_\_\_.**

- A) Coatings for everyday objects
- B) Paper products
- C) Wooden furniture
- D) Cotton fabrics

**15. What type of device, often made using nanotechnology, is used to detect extremely small amounts of substances in the UK for security or medical testing?**

- A) Biosensor
- B) Microscope
- C) Telescope
- D) Barometer

**16. The development of new \_\_\_\_\_ using nanotechnology in the UK could lead to faster and smaller electronic devices.**

- A) Semiconductors
- B) Light bulbs
- C) Batteries
- D) Speakers

**17. Which UK city is home to a significant cluster of nanotechnology companies and research institutions, particularly in the field of advanced materials?**

- A) Manchester
- B) London
- C) Birmingham
- D) Liverpool

**18. What is a key characteristic of nanomaterials that makes them useful for new technologies in the UK, such as catalysts?**

- A) High surface area to volume ratio
- B) Low density
- C) Large size
- D) Poor conductivity

**19. In the UK, nanotechnology is being researched for its potential to improve \_\_\_\_\_ for more sustainable water purification.**

- A) Filters
- B) Pipes
- C) Taps
- D) Drains

**20. What field of science specifically studies the behaviour and properties of matter at the nanoscale, with significant UK contributions?**

- A) Nanomaterials science
- B) Geology
- C) Astronomy
- D) Paleontology