

Introduction to Nanotechnology

Nanotechnology · Practice Test · 18 Questions

1. How many nanometres are in one metre?

- A) 100
- B) 1,000
- C) 1,000,000
- D) 1,000,000,000

2. Which tool do scientists use to see objects at the nanoscale?

- A) Magnifying glass
- B) Scanning electron microscope
- C) Standard camera
- D) Binoculars

3. What is the prefix 'nano-' derived from, meaning dwarf in Greek?

- A) Nanos
- B) Nanum
- C) Nanom
- D) Nanoski

4. Which material is a famous carbon-based nanomaterial shaped like a tube?

- A) Carbon nanotube
- B) Diamond rod
- C) Graphite sheet
- D) Silicon wire

5. At the nanoscale, which property of materials often changes compared to their bulk form?

- A) Weight
- B) Colour
- C) Chemical reactivity
- D) All of the above

6. What is the approximate scale range of nanotechnology?

- A) 1 to 100 nanometres
- B) 1 to 100 centimetres
- C) 1 to 100 metres
- D) 1 to 100 kilometres

7. Which field of study combines biology and nanotechnology?

- A) Nanomedicine
- B) Nanophysics
- C) Nanochemistry
- D) Nano-geology

8. What is one common consumer product that often uses nanotechnology?

- A) Cotton towels
- B) Sunscreen
- C) Wooden pencils
- D) Plastic spoons

9. How do nanoparticles interact with light differently than larger particles?

- A) They do not reflect light
- B) They change the colour of the material
- C) They become invisible
- D) They absorb all light

10. Why are scientists interested in using gold nanoparticles in medicine?

- A) They make medicine taste better
- B) They help deliver drugs to specific cells
- C) They make pills easier to swallow
- D) They turn medicine into gold

11. What is the main goal of using nanotechnology in electronics?

- A) To make devices larger
- B) To make devices faster and smaller
- C) To make devices cheaper to paint
- D) To make devices float

12. Which of these is a natural example of nanotechnology found in nature?

- A) The surface of a lotus leaf
- B) A standard brick
- C) A steel beam
- D) A cotton ball

13. What is the 'Lotus Effect' in nanotechnology?

- A) A flower's ability to glow
- B) A surface's ability to repel water and stay clean
- C) The way petals change colour
- D) The scent of a plant

14. What do we call a material that is only one atom thick?

- A) Graphene
- B) Plastic
- C) Iron
- D) Rubber

15. Nanotechnology involves manipulating matter at which level?

- A) Atomic and molecular
- B) Planetary
- C) Microscopic
- D) Telescopic

16. Why do nanoparticles have a larger surface area compared to their volume?

- A) They are very dense
- B) They are extremely small
- C) They are very long
- D) They are made of gas

17. What is one way nanotechnology improves tennis rackets?

- A) Makes them glow in the dark
- B) Makes them lighter and stronger
- C) Changes the shape of the balls
- D) Increases the price only

18. Which of these is an example of a nanomaterial structure?

- A) Fullerene
- B) Cinder block
- C) Concrete slab
- D) Glass pane