

Nanotechnology Basics

Nanotechnology · Practice Test · 25 Questions

1. What is the approximate scale of nanotechnology?

- A) 1 to 100 nanometers
- B) 1 to 100 millimeters
- C) 1 to 100 micrometers
- D) 1 to 100 centimeters

2. How many nanometers are in one meter?

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

3. Which prefix represents the 'nano' scale?

- A) One-thousandth
- B) One-millionth
- C) One-billionth
- D) One-trillionth

4. What is the primary unit of measurement in nanotechnology?

- A) Nanometer
- B) Millimeter
- C) Micrometer
- D) Centimeter

5. Which common material is often used in nanotechnology for its strength?

- A) Cotton
- B) Carbon nanotubes
- C) Plastic
- D) Wood

6. Nanotechnology involves manipulating matter at which level?

- A) Atomic and molecular
- B) Macro scale
- C) Planetary
- D) Microscopic cell

7. Which field of science does nanotechnology primarily rely on?

- A) Biology
- B) Astronomy
- C) Physics and Chemistry
- D) Geology

8. Which of these is a common application of nanotechnology in daily life?

- A) Sunscreen
- B) Concrete bridges
- C) Jet engines
- D) Space rockets

9. What does the term 'nano' originate from?

- A) Greek word for 'dwarf'
- B) Latin word for 'small'
- C) Ancient word for 'atom'
- D) French word for 'tiny'

10. Can a nanometer be seen with the naked human eye?

- A) Yes, easily
- B) Yes, under sunlight
- C) No, it is too small
- D) Only in a dark room

11. Which tool is commonly used to see at the nanoscale?

- A) Magnifying glass
- B) Scanning tunneling microscope
- C) Binoculars
- D) Standard laboratory telescope

12. Nanotechnology focuses on creating materials with what?

- A) New properties
- B) Larger sizes
- C) Less density
- D) Lower durability

13. At the nanoscale, which force becomes more dominant than gravity?

- A) Magnetic force
- B) Van der Waals forces
- C) Atmospheric pressure
- D) Friction

14. What is a 'buckminsterfullerene' also known as?

- A) Buckyball
- B) Nano-pipe
- C) Nano-prism
- D) Nano-cube

15. Nanotechnology is used in medicine to do what?

- A) Target specific cells
- B) Create new blood
- C) Grow limbs
- D) Replace bones

16. What type of carbon structure is a carbon nanotube?

- A) Cylindrical
- B) Spherical
- C) Pyramidal
- D) Cubic

17. Which industry uses nanotechnology to make fabrics stain-resistant?

- A) Textiles
- B) Agriculture
- C) Construction
- D) Automotive

18. Nanotechnology research often involves which academic department?

- A) Engineering
- B) Culinary arts
- C) History
- D) Political science

19. What happens to the surface area of a material when it is shrunk to the nanoscale?

- A) It decreases
- B) It increases significantly
- C) It remains the same
- D) It becomes zero

20. Which metal is frequently used in antibacterial nanotechnology products?

- A) Silver
- B) Lead
- C) Iron
- D) Mercury

21. Nanotechnology can be used to improve the efficiency of what?

- A) Solar panels
- B) Steam engines
- C) Manual typewriters
- D) Paper books

22. The field of nanotechnology is considered to be what?

- A) Interdisciplinary
- B) Outdated
- C) Theoretical only
- D) Non-scientific

23. In which decade did the concept of nanotechnology start gaining significant attention?

- A) 1950s
- B) 1980s
- C) 1920s
- D) 1910s

24. Which of these is a key goal of nanotechnology?

- A) Miniaturization
- B) Macro-expansion
- C) Weight increase
- D) Color removal

25. Nanotechnology can help in environmental cleanup by doing what?

- A) Filtering water
- B) Growing more trees
- C) Blocking the sun
- D) Heating the ocean