

Nanotechnology Basics

Nanotechnology · Answer Key · 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