



PHYSICS

BOOKS - FULL MARKS PHYSICS (TAMIL ENGLISH)

RECENT DEVELOPMENTS IN PHYSICS

**Textual Evaluation Solved Multiple Choice
Questions**

1. The particle of ZnO material is 30 nm. Based on the dimension it is classified as

- A. Bulk material
- B. Nanomaterial
- C. Soft material
- D. Magnetic material

Answer: b



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2. Which one of the following is the natural nanomaterial.

A. Peacock feather

B. Peacock beak

C. Grain of sand

D. Skin of the Whale

Answer: a



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3. The blue print for making ultra durable synthetic material is mimicked from

A. Lotus leaf

B. Morpho butterfly

C. Parrot fish

D. Peacock feather

Answer: c



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4. The method of making nanomaterial by assembling the atoms is called

- A. Top down approach
- B. Bottom up approach
- C. Cross down approach
- D. Diagonal approach

Answer: b



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5. "Ski wax" is an application of nano product in the field of

A. Medicine

B. Textile

C. Sports

D. Automotive industry

Answer: c



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6. The materials used in Robotics are

A. Aluminium and silver

B. Silver and gold

C. Copper and gold

D. Steel and aluminium

Answer: d



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7. The alloys used for muscle wires in Robots are

A. Shape memory alloys

B. Gold copper alloys

C. Gold silver alloys

D. Two dimensional alloys

Answer: a



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8. The technology used for stopping the brain from processing pain is

- A. Precision medicine
- B. Wireless brain sensor
- C. Virtual reality
- D. Radiology

Answer: c



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9. The particle which gives mass to protons and neutrons are

A. a) Higgs particle

B. b) Einstein particle

C. c) Nanoparticle

D. d) Bulk particle

Answer: a



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10. The gravitational waves were theoretically proposed by

A. Conrad Rontgen

B. Marie Curie

C. Albert Einstein

D. Edward Purcell

Answer: c



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1. Distinguish between Nanoscience and Nanotechnology.



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2. What is the difference between Nano materials and Bulk materials?



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3. Give any two examples for “Nano” in nature.



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4. Write the advantages and disadvantages of robotic.



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5. Why steel is preferred in making Robot?



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6. What are black holes?



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7. What are sub atomic particles?



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[Textual Questions](#) [Evaluation Questions](#) [Solved Questions](#) [Long Answer Questions](#)

1. Discuss the applications of Nanomaterials in various fields.



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2. What are the possible harmful effects of usage of Nanoparticles? Why? Possible harmful effects of usage of Nanoparticles:



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3. Write the key components of robot.



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4. Elaborate any two types of Robots with relevant examples.



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5. Comment on the recent advancement in medical diagnosis and therapy.



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Additional Questions Multiple Choice Questions

1. An automatic apparatus or device that performs functions ordinarily ascribed to human or operate with what appears to be almost human intelligence is called.....

A. Robot

B. Human

C. Animals

D. Reptiles

Answer: a



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2. The laws of Robotics are

A. a robot may not injure a human being

B. a robot must obey the order given by
human

C. a robot must protect its own existence

D. all of these

Answer: d



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3. The basic components of robot are.....

A. mechanical linkage

B. sensors and controllers

C. user interface and power conversion
unit

D. All the above

Answer: d



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4. What is the name for information sent from robot sensors to robot controllers?

A. temperature

B. pressure

C. feedback

D. signal

Answer: c



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5. Which of the following uses radio frequency to produce nano-particles?

- A. Plasma arching
- B. Chemical vapour deposition
- C. Sol-gel technique
- D. Electro deposition

Answer: a



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6. Which of the following the atoms do not move from each other?

A. Shape memory alloys

B. Nano materials

C. Dielectrics

D. Static materials

Answer: b



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7. The diameter of the nano wire is about

A. 10^{-6} m

B. 10^{-3} m

C. 10^{-8} m

D. 10^{-9} m

Answer: d



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8. A suspended nano wire is a wire that is produced in.....

A. Air medium

B. Vaccum

C. Low vaccum chamber

D. High vaccum chamber

Answer: d



9. For nano metres whose diameters less than are used as welding purposes.

A. 10 nm

B. 20 nm

C. 30 nm

D. 40 nm

Answer: a



10. Nano wires are used in

A. Transistors

B. Resistors

C. Capacitors

D. Transducers

Answer: a



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11. Generally what is the material of needle electrodes?

A. Stainless steel

B. Copper

C. Lead

D. Iron

Answer: a



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12.introduced is used to hold patients head and guide the placements of electrodes.

A. Monotaxic

B. Sterotonic

C. Stereotaxic

D. Monotonic

Answer: c



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13. Who is the father of the modern robotics industry formed the world's first robotic company in 1956?

A. Joliot

B. Cormark

C. Engelberger

D. Edward purcell

Answer: c



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14. In 1954, invented the first digitally operated programmable robot called unimate.

A. Edward purcell

B. George Devol

C. Engel berger

D. Joliot

Answer: b



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15. Artificial radioactivity was discovered by

- A. Joliot and Irene curie
- B. Felix Bloch and Edward purcell
- C. Cormack and Hounsfield
- D. Wilhelm conrad - Rontgen

Answer: a



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Additional Questions Short Answer Question

1. What is physics?



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2. Write down the applications of Nano technology?



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3. What is robotics ?



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4. What is meant by 'Robot'? Write its uses?



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5. What is particle physics ?



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6. Define cosmology?



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