

Time : 1 Hour 15 Minute

STD 11 Science Physics
Chapter Based Test

Total Marks : 40

Section A

* Choose The Right Answer From The Given Options.[1 Marks Each] [5]

- Microscopic domain includes:
(A) Quantum theory.
(B) Mechanics.
(C) Thermodynamics.
(D) Sound.
- C.V. Raman got Nobel prize for his discovery about:
(A) Ultrasonic.
(B) Molecular spectra.
(C) Theory of vision.
(D) Theory of vibration in musical instrument.
- The mass of air inside a room of dimension $(3 \times 4 \times 6)\text{m}^3$ can be compared to the mass of:
(A) Hen.
(B) Pencil.
(C) Table.
(D) Truck. Choose the correct option. (Given density of air = 1.3kgm^{-3})
- What is the range of the gravitational force?
(A) 10^{-2}m (B) 10^{-15}m
(C) Infinite (D) 10^{-10}m
- Who did not discover radioactivity?
(A) Becquerel. (B) Pierre curie.
(C) Marie curie. (D) Rutherford.

* Fill In The Blanks ॥ ज्ञानं एव श्रमस्य पुंजः ॥ [3]

- Rocket propulsion is based on the scientific principle of _____.
- _____ unified electromagnetism and optics by discovering that light is an electromagnetic wave
- Indian scientist Dr. C.V. Raman was awarded noble prize for discovery of _____.

* Answer The Following Questions In One Sentence.[1 Marks Each] [2]

- Name the scientific principle behind the technology, 'nuclear reactor.'

10. What is unified field theory?

Section B

*** Given Section consists of questions of 2 marks each.**

[8]

1. Name the contribution made by the following physicists:
 - i. S. N. Bose.
 - ii. J.C. Maxwell.
 - iii. Paul Dirac.
 - iv. Max Planck.
2. Theory and experiment go hand-in-hand in Physics. Give examples in support of this view.
3. Name the different types of forces and their range.
4. Name three conservation laws from nature.

Section C

*** Given Section consists of questions of 3 marks each.**

[12]

1. The industrial revolution in England and Western Europe more than two centuries ago was triggered by some key scientific and technological advances. What were these advances?
2. Name three important discoveries of physics, which have revolutionised modern chemistry.
3. In science sometimes we observe certain phenomenon experimentally but are unable to give a logical equation or theory for that. Sometimes, it also happens that we have a scientific theory supported by mathematical formulation yet are unable to test it immediately. Cite one such example.
4. Two principal thrusts in physics are unification and reduction. Justify by giving illustrations.

Section D

*** Given Section consists of questions of 5 marks each.**

[10]

1. It is often said that the world is witnessing now a second industrial revolution, which will transform the society as radically as did the first. List some key contemporary areas of science and technology, which are responsible for this revolution.
2. India has had a long and unbroken tradition of great scholarship-in mathematics, astronomy, linguistics, logic and ethics. Yet, in parallel with this, several superstitious and obscurantistic attitudes and practices flourished in our society and unfortunately continue even today-among many educated people too. How will you use your knowledge of science to develop strategies to counter these attitudes?
