

## **1.3 Related Fields to Physics**

### **Part Two**

#### **True/False Questions**

1. Physics is unrelated to biology and medicine.
2. Chemistry relies on physics principles such as thermodynamics and quantum mechanics.
3. Biophysics applies physics to study biological processes.
4. Seismology does not use any physics concepts.
5. Astronomy depends on physics to understand stars and galaxies.
6. Engineering does not require knowledge of physics.
7. X-rays and CT scans are applications of physics in medicine.
8. Ultrasound imaging is based on acoustic principles.
9. Nuclear physics is irrelevant to medical treatments.
10. Physics helps in understanding energy transfer in renewable energy systems.
11. Physics principles are both theoretical and practical application.
12. Understanding chemical reactions often requires knowledge of physics.

**Match the fields in column “A” with descriptions in column “B”. put the correct number in the space provided.**

**Column A (Fields / Applications)**

**Column B (Descriptions / Applications)**

- |                     |  |
|---------------------|--|
| 1. Chemistry        | .....A. Study of atomic nuclei and nuclear reactions           |
| 2. Biology          | ..... B. Applies physics to diagnose and treat diseases        |
| 3. Medicine         | ..... C. Studies matter composition and chemical reactions     |
| 4. Engineering      | ..... D. Studies living systems and biological processes       |
| 5. Astronomy        | ..... E. Designs machines, buildings, and vehicles             |
| 6. Geology          | ..... F. Uses physics to study stars, planets, and galaxies    |
| 7. Acoustics        | ..... G. Studies sound waves and vibrations                    |
| 8. Electromagnetism | ..... H. Studies Earth's structure, earthquakes, and Volcanoes |

9. MRI ..... I. Application of electromagnetism in medical imaging
10. Seismology ..... J. Uses wave propagation to study earthquakes
11. Ultrasound ..... K. Uses sound waves to image internal body parts
12. Nuclear Physics ..... L. Uses physics to explain magnetic and electric fields