

## Physics - 10th Class Physics English Medium Chapter 18 Preparation

Q1. what do you mean by unstable nucleus.

**Ans 1:** the nucleus which emit radiations, all the time, and hence continuously change from one type of element to another are called unstable nucleus.

Q2. Write types of radiation .

**Ans 1:** a. Alpha particles b. Beta particles c. Gamma particles.

Q3. What is Natural radioactivity.

**Ans 1:** In natural radioactivity a naturally unstable element spontaneously emit radiation to be stable.

**Ans 2:** Artificial Radioactivity: In artificial radioactivity stable elements bombarded with protons, neutrons or alpha particles to make them radioactive, such process of radioactivity is called artificial radioactivity.

Q4. What is Gamma radiations.

**Ans 1:** the gamma rays can penetrate to a considerable thickness of concrete. It is due to their large speed and neutral nature.

Q5. How half life can be calculated?

**Ans 1:** Half life can be calculated by following formula.  
Remaining atoms = original atoms  $\times \frac{1}{2^t}$

Q6. Define cosmic radiation?

**Ans 1:** The earth and all living thing on it receive radiation from outer space. This radiation is called comic radiations.

Q7. What is radioactive elements.

**Ans 1:** the elements which emit radiations are called radioactive elements.

Q8. What do you mean by radioisotopes?

**Ans 1:** Radioisotope.the stable and non radioactive elements can also be changed into radioactive element by bombarding them

with protons, neutrons or alpha particles, Such artificially produced radioactive element are called radioactive isotopes . or radio isotope

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Q9. What do you mean by stable nucleus.

**Ans 1:** The nucleus which don't emit radiations naturally are called stable nucleus.

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Q10. Define alpha particle.

**Ans 1:** Alpha particle has high mass due to this, its penetrating power is very short. It has large interacting and ionizing power. It is also the reason of its less penetrating power.

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