



PHYSICS

BOOKS - BETTER CHOICE PUBLICATION

RADIOACTIVITY

Very Short Answer Type Questions

1. What is the difference between an electron and a β -particle?



Watch Video Solution

2. Define decay constant.



[Watch Video Solution](#)

3. Define decay constant.



[Watch Video Solution](#)

4. What are α -particles?



[Watch Video Solution](#)

5. What is β -particle?



[Watch Video Solution](#)

6. Define beta (β) decay.



[Watch Video Solution](#)

7. Define gamma (γ) decay.



[Watch Video Solution](#)

8. Define alpha (α) decay



[Watch Video Solution](#)

9. Among α (alpha), β (beta) and γ (gamma) rays which one has highest penetrating power ?



[Watch Video Solution](#)

10. Among α (alpha), β (beta) and γ (gamma) rays which one has highest penetrating power ?



Watch Video Solution

11. Define Radioactivity of a radioactive substance.



Watch Video Solution

12. Which has greater ionising power : alpha particle or beta particle ?



[Watch Video Solution](#)

13. Among α (alpha), β (beta) and γ (gamma) radiations, which one is not affected by a magnetic field ?



[Watch Video Solution](#)

1. The neutron to proton ratio increases during β -decay. (True /false)



[Watch Video Solution](#)

2. Define half life of a radioactive substance.



[Watch Video Solution](#)

3. State the law of radioactive decay. Show that radioactive decay is exponential in nature.



Watch Video Solution

4. State the law of radioactive decay. Show that radioactive decay is exponential in nature.



Watch Video Solution

5. State the law of radioactive decay. Show that radioactive decay is exponential in nature.



[Watch Video Solution](#)

Long Answer Type Questions

1. State the law of radioactive decay. Show that radioactive decay is exponential in nature.



[Watch Video Solution](#)

2. State the law of radioactive decay. Show that radioactive decay is exponential in nature.



Watch Video Solution

3. State the law of radioactive decay. Show that radioactive decay is exponential in nature.



Watch Video Solution

4. State the law of radioactive decay. Show that radioactive decay is exponential in nature.



[Watch Video Solution](#)

Numericals Problems

1. The half life of a radioactive element X is 500 years. In how many years its activity will decrease by 90% of its initial value.



[View Text Solution](#)

2. The half life of a radioactive substance is 200 years. In how many years, its activity will decay to 0.1 times of its initial value.



[View Text Solution](#)

3. The half life of a radioactive element is 400 years. In how many years, its activity will decay to $\frac{1}{10}$ th of its initial value ?



[View Text Solution](#)

4. Half life of a certain radioactive material is 130 days. After what lapse of time, the undecayed fraction of the material will be 25% ?



Watch Video Solution

5. Half life of a certain radioactive material is 140 days. After what lapse of time, the undecayed fraction of the material will be 25% ?





[Watch Video Solution](#)

Most Expected Questions

1. What are γ -rays?



[Watch Video Solution](#)

2. Why do alpha particles have a high ionising power?



[Watch Video Solution](#)

3. What are radio-isotopes? What are their applications?



Watch Video Solution

4. What do you mean by activity of a radioactive substance ?



Watch Video Solution

5. Natural radioactive nuclei are nuclei of high mass number. Why?



[Watch Video Solution](#)

6. A nucleus contains no electrons, but can eject them. Why?



[Watch Video Solution](#)