



# PHYSICS

## BOOKS - PUNJAB BOARD PREVIOUS YEAR PAPERS

### Radioactivity

#### Exercise

1. Half life of a certain radioactive material is 130 days. After what lapse of time, the

undecayed fraction of the material will be 25%

?



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

?



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3. Define beta ( $\beta$ ) decay.



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4. Define gamma ( $\gamma$ ) decay.



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5. Define alpha ( $\alpha$ ) decay



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6. Define beta ( $\beta$ ) decay.



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7. Define Radioactivity of a radioactive substance.



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8. Define decay constant in Radioactivity.



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9. Define Radioactivity of a radioactive substance.



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10. What are  $\alpha$ -particles?



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11. What are  $\alpha$ -particles?



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12. Define beta ( $\beta$ ) decay.



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



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**14.** Among  $\alpha$  (alpha),  $\beta$  (beta) and  $\gamma$  (gamma) radiations, which one is not affected by a magnetic field ?



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**15.** Among  $\alpha$  (alpha),  $\beta$  (beta) and  $\gamma$  (gamma) rays which one has highest penetrating power ?



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



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



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**18.** What is natural radioactivity ? What type of radiations are emitted ? Write two properties of each one.



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



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**20.** What is nuclear fission and fusion.



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**21.** Define Binding energy of the nucleus. Draw and explain curve between Binding Energy per nucleon and mass number.



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



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**23.** What are nuclear forces ? Discuss four important properties of nuclear forces.



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



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



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**26.** Give three differences between alpha, beta and gamma rays.



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



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



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



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**30.** What is radioactivity ? Explain laws of radioactivity.



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



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



**Watch Video Solution**

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



**Watch Video Solution**



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



**Watch Video Solution**

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



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**36.** What is radioactivity ? Explain laws of radioactivity.



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**37.** What is radioactivity ? State laws of radioactive decay and deduce an expression for decay law. Show decay is exponential in nature.



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