

Name:   
Year :

Date :

## Radioactivity- Half Life



Resource1



Resource2



**Answer the following questions by referring to the video above.**

- Q1. Why decaying process is unpredictable? Because it is  process.
- Q2. What is meant by ACTIVITY of a sample? It is overall rate of  all the isotopes in the sample.
- Q3. State the unit of the activity.
- Q4. What is meant by half-life. Half- life is the time taken for the number of radioactive  in a sample to .
- Q5. From the video(first graph), what is the time take to make the activity of the sample to halve its value?
- Q6. We can say that the half-life of above sample is .

### **Extended Questions**

- Q7. Watch how to solve the related problems in the video and try to answer The questions below:
- a) A radioactive isotopes has a life-life of 15 days and an initial count-rate is 2000 counts per second. Determine the count-rate after 45 days.  Counts/s
- b) The half-life of a radioactive isotope is 27 years. How long will its mass take to fall from 2.00 g to 0.25 g?  years.
- c) The activity of an isotope falls from 6000 Bq (becquerel) to 1500 Bq in 10 days. What is its half-life?  days.