

# ATOMS

## Test Paper-I

**MAX MARKS: 30**

**TIME: 90Mts**

Sl. No.	QUESTION	ANSWER PAGE	MARKS
1	What is the cause for continuous EMR emitted by condensed matter and dense gases at all temperatures	page:414	1
2	Give the difference between the radiation given out by condensed matter and rarefied gases heated in a flame.	page:415	1
3	What is nuclear model of atom?	page:415	1
4	Draw a neat labelled diagram showing the Geiger-Marsden scattering experiment.	page:416	2
5	Show the graphical variation of Number of scattered particles detected with scattering angle obtained by Geiger-Marsden.	Page:417	2
6	Give the experimental results of Rutherford $\alpha$ -ray scattering experiment.	Page:417	3
7	What are $\alpha$ -particles?	Page:417	1
8	Define impact parameter.	Page:418	1
9	Name the factor on which the trajectory traced out by a $\alpha$ -particle depends upon.		2
	What is its impact on the trajectory of the $\alpha$ -particle?	Page:418	
10	Derive an expression to find the total energy of an electron in a hydrogen atom.	Page:420	3
11	Give the significance of negative sign in the expression for total energy of an electron.	Page:420	1
12	How do you identify a gas using emission line spectra?	Page:421	2
13	Give the different spectral series emitted by Hydrogen atom.	Page:422	2
14	What are the draw backs of Rutherford model of atom?	Page:423	2
15	Give the postulates of Bohr Model of atom	Page:424	2
16	Derive an expression to find total energy of an electron in the $n^{\text{th}}$ orbit.	Page:425	2
17	How can you explain the quantized electron orbits and energy states of an atom?	Page:431	2