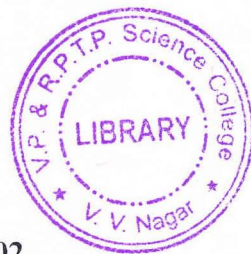


**VITTHALBHAI PATEL & R.P.T.P. SCIENCE COLLEGE**  
**VALLABH VIDYANAGAR**



**B.Sc.-Semester VI**

**PHYSICS**

**US06CPHY02**

**(Atomic - Molecular Physics, Energy Science and Earth Science)**

**Date:11 -03 -2014**

**Time:03-30 to 05:00pm**

**Maximum Mark:30**

*Instruction: (1) Attempt all the questions*

*(2) Figures on right hand side indicates full mark of that question.*

**Q-1 Short Questions (answer any three)**

**06**

- (i) What is Emission Spectra ?
- (ii) State Ritz Combination principle.
- (iii) Clarify the concept of Rigid rotator.
- (iv) Give the difference between Raman spectra and Fluorescence spectra.
- (v) Give the composition of core region of the earth.
- (vi) Define Seismograph.

**Q-2 Discuss Bohr's theory for the spectrum of Hydrogen atom.**

**08**

**OR**

**Q-2 Write a note on 'Stern and Gerlach experiment' in detail.**

**08**

**Q-3 Give an explanation of Rotational spectra using Rigid rotator's concept.**

**08**

**OR**

**Q-3 Narrate experimental arrangement to obtain Raman spectra.**

**08**

**Q-4 What is Plate tectonics?-Discuss classification of different plates.**

**08**

**OR**

**Q-4 What is Earth quake?- Discuss how to determine the Epicenter and the Focus of earth quake.**

**08**

