Printing Page(s) : 1 **Paper Code :DSC-303**

Roll No.

B.Sc. (PCM)-19

3rd Year Examination, Academic Batch 2018

Physics-V (Atomic and Nuclear Physics)

Time : 3 Hours] *[Max. Marks : 100*

***Note**. Attempt any **five** questions. All questions carry equal marks.*

Q.1 Discuss Moseley's law. Show how it can be used in removing some of the defects in the periodic table.

Q.2 Discuss Stern-Gerlach experiment.

Q.3 How is Raman Effect observed? Give an experimental arrangement for the study of Raman spectra.

Q.4 Describe main features of pure-rotational band spectra of dia-atomic molecules.

Q. 5 (a) Describe an ionization chamber and explain its working.
(b) Describe a proportional counter and explain its working.

Q. 6 Describe the construction and working of Ruby laser.

Q. 7 Explain G.M. counter an d explain its working. ,

Q. 8 (a) Explain continues X-ray spectrum with its properties.
(b) Write short note
(i) Salient features of X-ray spectra
(ii) Heisenberg's uncertainty Principle