

Minor Test – I
DSL-731 Optical Components and Basic Instruments

Dated: 30/08/2016

Duration: 1 Hour

Marks – 25

Ques.1

- a) Define third order astigmatism. On what factors astigmatism depends? How it will affect the image quality? (4)
- b) Define spherical aberration. On what factors it depends? (4)
- c) Define petzwal surface? (3)

Ques.2 Explain the working of following with proper ray diagram -

- a) Porro prism. Explain how combination of porro prism inverts the image from top to bottom and left to right? (4)
- b) Penta prism (2)

Ques.3

- a) Explain in brief the working of plane diffraction grating? (2)
- b) Explain the meaning of dispersion in gratings? How the angular and linear dispersion can be related. (2+2)
- c) Explain the meaning of resolution of grating. (2)