

[LH 0815]

AUGUST 2015

Sub. Code :6002

B.Sc. OPTOMETRY

FIRST YEAR

PAPER I – PHYSICAL AND GEOMETRICAL OPTICS I & II

Q.P. Code: 806002

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 =30)

1. Refraction of light on a plane surface according to Fermat's principle.
2. Newton's rings method in reflected light to find the refractive index of a liquid.
3. Basic laser principle and the production of laser using ruby.

II. Write notes on:

(8 x 5 = 40)

1. Applications of interference of light.
2. Ultra-violet spectrum.
3. Einstein's equation of photoelectric effect.
4. Nodal points and nodal planes.
5. Population inversion in laser.
6. Coma.
7. Total internal reflection.
8. Presbyopia.

III. Short answers on:

(10 x 3 = 30)

1. Testing of planeness of surface.
2. Huygen's wave theory.
3. Fresnel and Fraunhofer's diffraction.
4. Applications of photoelectricity.
5. Double refraction.
6. Prism diopter.
7. Ophthalmic applications of laser.
8. Definition of lumen and illumination.
9. Resolving power of a prism.
10. Emmetropia.
