B.OPTOM
(New Syllabus 2015-2016)

FIRST YEAR
PAPER III – PHYSICAL AND GEOMETRICAL OPTICS (I & II)

Q.P. Code: 802703

Time: Three Hours   **Maximum: 100 Marks**
Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Describe the construction and working of Michelson Interferometer and how it is used to measure the wavelength?

2. Write the etiology, clinical varieties, features and treatment of myopia.

3. Explain Fraunhofer diffraction along a (a) single slit (b) circular aperture.

II. Write notes on: **(8 x 5 = 40)**

1. Nicol prism.
2. Define astigmatism. Write about types of astigmatism.
3. What is conoid of Sturm? Illustrate with diagram.
4. Population inversion.
5. Angular magnification.
6. Antireflection coating.
7. Zone plate.
8. Fermat's principle.

III. Short answers on: **(10 x 3 = 30)**

1. Spectrum of visible light.
2. Refractive index of a medium.
3. Nodal points.
4. Testing of planeness of surface.
5. Plane polarized light.
6. Distortion.
7. Coherence length and coherence time.
8. Fresnel's assumptions.
9. Malus' law.
10. Resolving power.

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