

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423]

APRIL 2023

Sub. Code: 2733

B.OPTOM

FIRST YEAR (Regulation 2018-2019 onwards)

PAPER III - PHYSICAL AND GEOMETRICAL OPTICS

Q.P. Code: 802733

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 =30)

1. Aberrations in Optics.
2. Refraction of light on a plane surface according to Fermat's principle.
3. Etiology, signs, symptoms and treatment of Hypermetropia.

II. Write notes on:

(8 X 5=40)

1. Thomas young experiment.
2. Astigmatism and its types.
3. Michelson interferometer.
4. Total internal reflection.
5. Emission and absorption spectra.
6. Ultraviolet spectrum.
7. Double refraction.
8. Weber's law.

III. Short Answers on:

(10 X 3=30)

1. Raman effect.
2. Huygen's wave theory.
3. Photoelectric effect.
4. Polarization of light.
5. Constructive and destructive interference.
6. Biquartz.
7. Optical activity.
8. Laws of reflection.
9. Myopia and its remedy.
10. Dispersion of light.
