

Paper - II

B.Sc. 2nd year [4th Semester] (M/GARH)

\* OPTICS - II \*

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Session: 2022-23 (Even Semester)

⇒ Jan - 2023 :-

⇒ WEEK - 1  
From 17 Jan to 21 Jan :- [UNIT - I]

- \* Interference by division of amplitude.
- \* Colour of thin film \*

⇒ Week - 2 (23 Jan to 28 Jan)

- \* Wedge shape film.
- \* Newton's Rings.

⇒ Week - 3 [30 Jan & 31 Jan]

- \* Interferometers: Michelson's Interferometer and its applications.

⇒ Feb - 2023 :-

⇒ Week - 1st [01 Feb to 04 Feb]

- \* Fresnel's diffraction :-
- \* Fresnel's half period zones, Zone plates

⇒ Week - 2nd [06 Feb to 11 Feb]

- \* Diffraction at a straight edge.
- \* Rectangular slit and Circular aperture.

⇒ Week - 3rd [13 Feb to 18 Feb] [Unit - II]

- \* Fraunhofer diffraction :- one slit diffraction.
- \* Two slit diffraction.
- \* N-slit diffraction.

[P.T.O.]

EK-4th [20 Feb to 25 Feb]

Plane transmission grating spectrum.

\* Dispersive power of a grating.

→ Week-5th [27 Feb & 28 Feb].

\* Limit of resolution.

\* Rayleigh's Criterion.

→ March-2023

→ Week-1st [01 March to 04 March]

\* Resolving power of telescope.

\* Resolving power of a grating.

→ Week-2nd [06 March to 11 March]

\* HOLE VACATION \*

→ Week-3rd [13 March to 18 March] [UNIT-III]

\* Polarization.

\* Polarisation and Double refraction.

\* Polarisation by reflection.

→ Week-4th [20 March to 25 March]

\* Polarisation by Scattering.

\* Malus law.

\* Phenomenon of double refraction.

→ Week-5th [27 March to 31 March]

\* Huygen's wave theory of double refraction.

\* Normal and oblique incidence.

April - 2023\*

Week - 1st [01 April to 08 April]

- \* Analysis of Polarised light.
- \* Nicol prism.
- \* Quarter wave Plate

Week - 2nd [10 April to 15 April]

- \* Half wave plates.
- \* Production and detection of plane polarised light.
- \* Production and detection of circularly polarised light.

Week - 3rd [17 April to 22 April]

- \* Production and detection of elliptically polarised light.
- \* Optical activity.

Week - 4th [24 April to 30 April]

- \* Fresnel's theory of rotation.
- \* Specific rotation.
- \* Polarimeters (half shade & Biquartz).

May - 2023 [Week - 1st]

From 01 May to 06 May \*

\* Revision & Class test \*