Government General Degree College, Chapra
Physics (General)
4th Semester internal examination, 2021-22

Total marks: 15   **Duration: 40 min**

Answer any **three** questions: 3X5=15

1. Explain how Maxwell's equations contribute to our understanding of the propagation of light as an electromagnetic wave.

2. Discuss the concept of polarization of electromagnetic waves. How does the polarization of light change upon reflection and transmission?

3. Provide the integral forms of all four Maxwell's equations. Explain the physical meaning of each equation.

4. Express each of the integral Maxwell's equations in their corresponding differential forms. Justify the usefulness of both forms.

5. Explain the phenomenon of dispersion in electromagnetic waves. How does the speed of propagation vary with frequency in dispersive media? Provide an example of a naturally occurring dispersive medium.

6. Describe Brewster's angle. How is it related to the polarization of light upon reflection?

7. What is meant by circular polarization of light? Provide an example of a natural source of circularly polarized light.