## OPTCIS – II Semester – III

Time Allowed : Three Hours] [Maximum Marks : 40

**Note :** The candidates are required to attempt *two* questions each from Section A and B carrying 8 marks each and the entire Section C consisting of 8 short answer type questions carrying 1 makrs each.

### Section : A

| | | | |
|---|---|---|---|
| 1. | (a) | Give applications of Fabry Perot Interferometer. | 4 |
| | (b) | What do you mean by Antireclecting Coating ? | 4 |
| 2. | (a) | Explain Temporal Coherence. | 4 |
| | (b) | Give important applications of Michelson Interferometer. | 4 |
| 3. | (a) | How do you obtain localised fringes in Michelson Interferometer? | 4 |
| | (b) | Determine wavelength of light by Newton's Ring Appartus. | 4 |
| 4. | (a) | What is non-reflecting film ? How it is achieved ? | 4 |

(b) For two coherent source ratio of intensity maximua and minima is 9 : 1. Determine ratio of two intesities. 4

**Section : B**

5. Give production of plane polarised, elliptically polarised and circularly polarised light. 8

6. (a) Give Huygen's Theory of Double Reflection. 4
   (b) What is a Polarised ? How can it be produced ? Is is the same as sheet polariser ? 4

7. (a) What are quarter wave plates and half wave plates ? How are they prepared ? 4
   (b) Give resolving power of telescope. 4

**Section : C**

8. Explain briefly :
   (a) What is Rayleigh's criterison of resolution ?
   (b) Compare zone plate with convex lens.
   (c) What do you mean by Fringe Width ?
   (d) Why is one plate half silvered in Michelson's Interferometer ?
   (e) What do you mean by Coherent Sources ?
   (f) Give Principle of Superposition.
   (g) Define Half Fringe Width.
   (h) What do you mean by Multiple Beam Interference ? 8×1=8