

Manas Shinde

F-C

Sunday Batch

MCT
MANJARA CHARITABLE TRUST
RAJIV GANDHI INSTITUTE OF TECHNOLOGY

DATE: - 16/02/2015

TERM TEST NO.1

Marks: 15

Sub: Applied physics - II

Time: 45 min.

Q.1. Solve any 5 questions from the following. (2 marks each)

- What is LASER? Write properties of laser light?
- Write any four differences between spontaneous & stimulated emission?
- Write any four differences between photography & holography?
- What is TIR? Write conditions of TIR?
- Write any four differences between step index & graded index optical fiber?
- An optical fiber has core R.I. 1.5 & fractional index difference is 0.0005. Calculate its numerical aperture? n d-
- A step index fiber has normalized frequency 4.052, calculate the number of modes the fiber will support?

Q.2. Attempt the following (05 marks)

- Explain the construction & working of He-Ne laser source with the help of energy level diagram?

OR

- What is numerical aperture? Derive the expression of numerical aperture for fiber optics cable?