

Dr. Arvind Kumar

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29/11/2023 (E)
End Semester Examination

Subject Code: PH-430

Subject Name: Laser Metrology

Semester: 7th

Branch: B.Tech. (Engg. Physics)

Max. Marks: 50

Max. Time: 03 Hours

Note: Attempt all questions.

- Q1: Write the characteristics of Laser measurements. (5)
- Q2: Draw the schematic basic set-up of a typical laser measuring system. (5)
- Q3: Write the names of laser beam parameters used in metrology. (5)
- Q4: Write "LIGO" in its entirety and include an application for it. (5)
- Q5: Describe accelerometers and list their uses. (5)
- Q6: Discuss how the Newton interferometer works. (5)
- Q7: Discuss the measurement of temporal coherence length using a proper schematic experimental diagram. (10)
- Q8: Discuss theoretically the fundamental concept of laser interferometry in order to extract phase information. (10)