Reg. No. : | | | | | | | | | | |

Question Paper Code: 39506

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Elective

Electronics and Instrumentation Engineering

01UEI906 - LASER AND FIBRE OPTICS INSTRUMENTATION

(Regulation 2013)

Duration: 1:45 hour Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. Enlist the properties of laser.
2. Mention the applications of Q switching.
3. Identify the applications of laser in industry?
4. What are the advantages of laser welding?
5. Write any two applications of holographic interferometry.
6. What is an optical fiber?
7. What is an optical fiber?
8. What are the various losses in an optical fiber?
9. What is a fiber optic gyroscope?
10. In what ways the optical fibers are used in instrumentation?
11. Give any four desirable properties of lasers.
12. List the different types of lasers based on the state of matter of the active medium. Give one example for each.
13. Identify the applications of laser in industry?

14. Define laser welding?

15. Define holographic interferometry.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. What is resonator configuration? How it is achieved? (10)

17. Write notes on LASER heating and welding. (10)

18. Explain the three scientific applications of Holography. (10)

19. Explain the propagation of light through fiber. Also give the different types of fibers and their properties. (10)

20. With a neat diagram explain the working of fiber optic Instrumentation system. (10)