MODERN LASER EDUCATOR KIT

LIST OF EXPERIMENTS

(A) Laser Characterstics

1. To measure the divergence of Laser beam by the size of spots.
2. To measure the divergence of Laser beam by a Lens.
3. To measure the beam diameter.
4. To measure the intensity distribution in the beam.
5. To demonstrate the spatial coherence of Laser by double slit.
6. To demonstrate the temporal coherence and measurement of coherence length.

(B) Interference

7. To study interference due to a double slit.
8. To study interference due to Lloyds mirror.
9. To measure the wedge angle of a glass flat by interference.
10. To measure the wavelength of He-Ne Laser by Fresnel biprism.

(C) Diffraction

11. To measure the diameter of a hair or thin wire.
12. To measure the diameter of a micro hole.
13. To measure the number of lines in a transmission grating.
14. To measure the wavelength of a He-Ne laser using vernier calipers or engraved ruler.
15. To measure the width of a single slit.
16. To measure the separation of two pin holes by diffraction.

(D) Polarisation

17. To study measure optical rotation of quartz.
18. To measure Brewster angle of a glass plate and its refractive index.
19. To Study and Produce circularly polarised light by Fresnel's Rhomb.

(E) Fiber Optics

20. To measure the Numerical aperture of a fibre.
21. To measure the attenuation in a single mode fiber.
22. To Measurement of bending losses in an optical fiber.
23. To study the Gaussian mode field distribution of a fiber.

(H) Miscelleneous Experiments

24. To measure the refractive index of a glass using a 60° prism.
25. To measure the small wedge angle by double spot technique.

LIST OF ITEMS

1. Fresnel Biprism	1 No.	21. Fresnel rhomb	1 No.
2. Flat glass plate	1 No.	22. Detector & pinhole	1 No.
3. Micro hole	1 No.	23. Digital multimeter	1 No.
4. Mounted thin wire	1 No.	24. Prism 60°	1 No.
5. Beam expander	1 No.	25. Lloyds mirror	1 No.
6. Precision mounts	6 Nos.	26. Knife edge	1 No.
7. Mount base	6 Nos.	27. Beam splitter	1 No.
8. Quartz plate	1 No.	28. Total reflector	2 Nos.
9. Ruler	1 No.	29. Optical fiber	2 Nos.
10. Screen	1 No.	30. Microbend deformer	1 No.
11. Grating (three in one)	1 No.	31. Wedge	1 No.
12. Vernier caliper	1 No.	32. Measuring tape	1 No.
13. Pair of polarisers	2 Nos.	33. Graph paper	1 No.
14. Convex lens (one small focal length & other of large focal length)	2 Nos.	34. Rohmb mount	1 No.
		35. X-Y-Z positioner	1 No.
15. Circular table (with levelling screws)	1 No.	36. Microscopic objective 10X or 20X	1 No.
16. Graduatedcricular table	1 No.	37. Glass plate	1 No.
17. Single slit	1 No.	38. Fiber chuck	1 No.
18. Double slit	1 No.	39. Fiber holder	1 No.
19. Grating mount	1 No.	40. Objective holder	1 No.
20. Two pin holes	1 No.	41. Instruction manual	1 No.