(Advanced Laser Physics (1

- 1. Ray tracing 2. Gaussian beams 3. Optical resonators (stable and unstable 4. Resonance optical cavities, axial and transverse modes 5. laser oscillation and amplifications 6. General characteristics of lasers 7. Transient effects; mode locking and Q-Switching 8. Principles of Diode laser and optical fiber laser 9. Tunable lasers and their applications in spectroscopy 10. Optimum Coup[ling Equations 11. Fast processes 12. Diagnosis of laser properties including line width, pulse len