I	Explain interference in thin film by reflection with conditions.	7
	Newton's rings are observed in the reflected light of wave length 5900A0. The diameter of 10th dark ring is 0.5 cm. find the radius of curvature of the lens used?	3
I	Discuss Types of polarizations	5
	Write about Half wave and Quarter wave plates	5
I	What is double refraction	2
	Explain construction and working principle of Nicol's prism with limits.	8
I	Can you list three difference between Fresnel and Fraunhofer diffraction	2
	Explain Fraunhofer diffraction due to double slit	8
I	Illustrate about double refraction	5
	What is diffraction grating? Explain it	5
I	Describe Fraunhofer Diffraction due to single slit and obtain Maxima, minima and secondary Maxima conditions?	10
I	Describe polarization by reflection (brewster's law)	6
	Find the minimum thickness of half wave plate and quarter wave plate for a light beam (λ=589.3nm) if μ_0 = 1.65833 and μ_e = 1.48640	4
I	Derive the expressions for the diameters of dark and bright fringes in Newton's rings experiment	8
	Newton's rings are observed in the reflected light of wave length 5900A0. The diameter of 10th dark ring is 0.5 cm. find the radius of curvature of the lens used?	2
II	Explain Construction and working principles of Ruby laser	7
	Write any six applications of laser	3
II	Describe Construction and working principles of He-Ne laser	8
	Write any four applications of laser	2
II	Discuss characteristics of lasers	5
	Write and explain Pumping methods of lasers	5
II	Define Numerical aperture and acceptance angle	3
	Derive equation for Acceptance angle and numerical aperture	7
II	Summarize about the Step index optical fiber	7
	A fiber has a core refractive index of 1.44 and cladding refractive index of 1.4. Find its acceptance angle,numerical aperture.	3
II	Explain working principles of Optical fiber	5
	Write the signal losses in optical fiber	5
II	Demonstrate Optical fiber Communication system with neat diagram	8
	Write any four applications of Optical fiber	2
II	Distinguish between spontaneous and stimulated emission of radiations	6
	An optical fiber has a core refractive index of 1.55 and cladding refractive index of 1.50. Find its numerical aperture and fractional difference of refractive indices	4