Time- 1hr Class XII A & M Subject Physics M.M-27

1. What are Polaroids? Write some of its uses. [2]
2. State and derive Brewster's law [2]
3. State laws of photoelectric emission. Establish Einstein photoelectric relation. Explain the laws of photoelectric emission on the basis of this relation. [3]
4. Explain the terms: stopping potential and threshold frequency in photoelectric emission. Draw a graph showing the variation of stopping potential with frequency of incident light in relation to photoelectric effect. [3]
5. Plot a graph showing the variation of photoelectric current with anode potential for two light beams of same wavelength but different intensity. [3]
6. What is meant by fringe width .Derive an expression for fringe width in interference pattern? [3]
7. Derive lens maker's formula for a thin a convex lens. [3]
8. State and prove prism formula [3]
9. With the help of a ray diagram, explain the formation of the image in a compound microscope. Derive an expression for its magnifying power. How can its magnifying power. How can its magnifying power be increased? [5]