

## Worksheet: Wave Optics

Uttar Pradesh State Board · Class 12 · Physics · 5 questions · 12 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 12

**Q1.** In YDSE,  $\lambda = 600 \text{ nm}$ ,  $d = 0.2 \text{ mm}$ ,  $D = 1.5 \text{ m}$ . Find the fringe width. [2 marks]

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**Q2.** Find Brewster's angle for glass ( $\mu = 1.5$ ). [2 marks]

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**Q3.** A single slit of width  $0.1 \text{ mm}$  with  $\lambda = 500 \text{ nm}$  and screen at  $1 \text{ m}$ . Find the central maximum width. [3 marks]

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**Q4.** Two polarisers are at  $60$  degrees. If  $I_0$  falls on the first, find the transmitted intensity. [3 marks]

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**Q5.** What happens to YDSE fringe width if the apparatus is immersed in water ( $\mu = 4/3$ )? [2 marks]

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