

## Worksheet: Ray Optics and Optical Instruments

Telangana State Board · Class 12 · Physics · 5 questions · 14 marks

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

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

Score: \_\_\_\_\_ / 14

**Q1.** Find the critical angle for a glass-air interface ( $\mu = 1.5$ ). [2 marks]

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**Q2.** A convex lens of focal length 20 cm forms a real image at 30 cm. Find the object distance. [3 marks]

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**Q3.** A 60 degree prism has minimum deviation 40 degrees. Find the refractive index. [3 marks]

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**Q4.** A compound microscope has  $f_0 = 1$  cm,  $f_e = 2.5$  cm, tube length 20 cm. Find the magnification. [3 marks]

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**Q5.** An object is 5 cm from a concave mirror of focal length 10 cm. Find the image and magnification. [3 marks]

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