PHYSICS

BOOKS - PUNJAB BOARD PREVIOUS YEAR PAPERS

Dispersion and Prism

Exercise

1. A ray of light passes through an equilateral glass prism, such that angle of incidence is

equal to the angle of emergence. If the angle of emergence is $3/4$ times angle of prism, calculate the refractive index of the glass prism.

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2. A narrow beam of light is incident normally on one face of a glass prism having refractive index 1.48. Find the angle of prism if the ray makes a grazing emergence along the other face. Draw a diagram showing the path of rays.

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3. What is the essential condition for observing rainbow ?

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4. State rayleigh's law of scattering.

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5. Define dispersive power of a prism.

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6. Which colour deviates most on passing through prism?

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7. Which colour deviates least on passing through prism ?

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8. Why does the colour of the sky appear blue?

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9. Why the rising sun looks to be red, explain ?

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10. Why does the sun looks red at the time of setting ? Explain on the basis of colloidal properties.

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11. Why does the colour of the sky appear blue?

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12. State the reason for the following observations recorded from the surface of moon.sky appears dark

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13. State the reason for the following observations recorded from the surface of moon rainbow is never formed.

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14. Why does the sun appear reddish in the morning (as well as in evening)?

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15. Why does the colour of the sky appear blue?

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16. Why does the sun looks red at the time of setting ? Explain on the basis of colloidal properties.

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17. What is dispersion of light ? Explain it with a ray diagram. Also explain the cause of dispersion of light.

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18. Why is there no dispersion of light refracted through a rectangular glass slab ? Give reason.

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19. Explain why danger signals are made of red colour ?

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20. Can we observe dispersion of light in a rectangular glassslab? Explain.

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21. Why does the colour of the sky appear blue?

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22. Explain refraction of light through a prism and derive relations: $\mu = \frac{\sin\left(\frac{A+\delta m}{2}\right)}{\sin\frac{A}{2}}$

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23. Why does the sun appear reddish in the morning (as well as in evening)?

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24. Explain refraction of light through a prism and derive relations: $\mu = \dfrac{\sin\left(\dfrac{A+\delta m}{2}\right)}{\sin\dfrac{A}{2}}$

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25. Explain refraction of light through a prism and derive relations: $i + e = A + \delta$

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26. Explain refraction of light through a prism and derive relations: $\mu = \dfrac{\sin\left(\dfrac{A+\delta m}{2}\right)}{\sin\dfrac{A}{2}}$

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27. Explain refraction of light through a prism and derive relations: $\mu = \dfrac{\sin\left(\dfrac{A+\delta m}{2}\right)}{\sin\dfrac{A}{2}}$

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28. Explain refraction of light through a prism and derive relations: $i + e = A + \delta$

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29. Explain refraction of light through a prism and derive relations: $\mu = \frac{\sin(A + \delta m)}{\sin \frac{A}{2}}$

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30. Write deviation formula for prism.

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31. Write deviation formula for prism.

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32. Explain refraction of light through a prism and derive relations: $i + e = A + \delta$

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33. Explain refraction of light through a prism and derive relations: $\mu = \dfrac{\sin(A + \delta m)}{\dfrac{2}{\sin \frac{A}{2}}}$

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