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Series-A A-854-A(S)

[Total No. of Printed Pages-2

A-854-A(S)-XII-2320

PHYSICS

(Solution)

1. ——— b
2. ——— d
3. ——— c
4. ——— d
5. ——— d
6. ——— d
7. ——— b
8. ——— d
9. ——— b
10. ——— d

A-854-A(S)

[P.T.O.]

$$11. \quad \mu = \frac{1}{\sin c}$$

$$\sin c = \frac{1}{\mu} = \frac{1}{\sqrt{2}} = \sin 45^\circ$$

$$\Rightarrow c = 45^\circ$$

Series-B A-854-B(S)

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A-854-B(S)-XII-2320

PHYSICS

(Solution)

1. _____ d
2. _____ d
3. _____ c
4. _____ a
5. _____ b
6. _____ c
7. _____ c
8. _____ b
9. _____ d
10. _____ d
11. $R = -40$ cm.

$$f = -\frac{40}{2} = -20 \text{ cm.}$$

$$u = -10 \text{ cm}$$

$$+\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$$

A-854-B(S)

[P.T.O.]

$$\frac{1}{v} = \frac{-1}{u} + \frac{1}{f}$$

$$\frac{1}{v} = \frac{-1}{-10} + \frac{1}{-20} = \frac{1}{10} - \frac{1}{20} = \frac{1}{20}$$

$$v = 20 \text{ cm}$$

Image formed is virtual, erect, magnified and is formed behind the mirror.

21. Voltage = 220 V.

Power = 880 W

$$R = \frac{V^2}{P} = \frac{(220)^2}{880} = 55 \Omega \quad R = 55 \Omega$$

$$I = \frac{V}{R} = \frac{220}{55}$$

$$I = 4A$$

Series-C A-854-C(S)

[Total No. of Printed Pages-2

A-854-C(S)-XII-2320

PHYSICS

(Solution)

1. ——— a

2. ——— d

3. ——— c

4. ——— a

5. ——— b

6. ——— a

7. ——— b

8. ——— c

9. ——— b

10. ——— c

11. $\mu = \frac{C}{V}$

$$\therefore V = \frac{C}{\mu} = \frac{3 \times 10^8}{1.5} = 2 \times 10^8 \text{ m/s}$$

Speed of light in glass = 2×10^8 m/s

A-854-C(S)

[P.T.O.]

we know

$$\mu = \frac{1}{\sin C}$$

$$\sin C = \frac{1}{\mu} = \frac{1}{1.5}$$

$$C = \sin^{-1} \left(\frac{1}{1.5} \right) = 41.8^\circ \approx 42^\circ$$

$$21. R_s = R_1 + R_2 = 25 \Omega$$

$$R_1 = 25 - R_2$$

$$R_p = \frac{R_1 R_2}{R_1 + R_2} = 4 \Omega$$

$$\Rightarrow \frac{(25 - R_2) R_2}{(25 - R_2) + R_2} = 4$$

$$\Rightarrow R_2^2 - 25 R_2 + 100 = 0$$

$$(R_2 - 20)(R_2 - 5) = 0$$

$$R_2 = 20, 5$$

$$\therefore R_1 = 5, 20$$