60/60 : 100%
Pass

✓ **Correct** Marks: 2 / 2 Time Taken: 15 Seconds

Q: 1 Study the following information carefully
(i) A, B, C, D and E are five men sitting in a line facing to South – while M, N, O, P and Q are five ladies sitting in a second line parallel to the first lineand are facing to North.

(ii) B who is just next to the left of D, is opposite to Q.

(iii) C and N are diagonally opposite to each other.

(iv) E is opposite to O who is just next right of M.

(v) P who is just to the left of Q, is opposite to D.

(vi) M is at one end of the line.

Who is sitting just opposite to N?

ନିମ୍ନଲିଖିତ ସୂଚନାକୁ ଭଲ ଭାବରେ ଅଧ୍ୟୟନ କରନ୍ତୁ |
(i) A,B,C,D ଓ E ପାଞ୍ଚଜଣ ପୁରୁଷ ଗୋଟିଏ ଲାଇନ ରେ ଦକ୍ଷିଣ ଦିଗକୁ ମୁଁହ କରିକି ବସିଛନ୍ତି , ସେହିପରି M, N, O, P ଓ Q ପାଞ୍ଚଜଣ ସ୍ତ୍ରୀ ୨ ୟ ଲାଇନରେ ୧ ମ ଲାଇନ ସହ ସମାନ୍ତର ହେଇକି ଦକ୍ଷିଣ କୁ ମୁଁହ କରିକି ବସିଛନ୍ତି ।

(ii) B ଯିଏ D ର ବାମ ପାଖରେ, Q ର ବିପରୀତ |

(iii) C ଏବଂ N ପରସ୍ପର ବିପରୀତ ଭାବରେ ବିପରୀତ |

(iv) E ର ବିପରୀତ ଯିଏ M ର ପରବର୍ତ୍ତୀ ଅଧିକାର |

(v) P ଯିଏ Q ର ବାମ ପାର୍ଶ୍ୱରେ ଅଛି, D ର ବିପରୀତ |

(vi) M ରେଖାର ଗୋଟିଏ ମୁଣ୍ଡରେ ଅଛି |

N ର ବିପରୀତ କିଏ ବସିଛି?

A. B
✓ Your Ans **B.** A
C. D
D. E

Section: APPTITUDE **Question Type:** Multiple Choice (Radiobutton) **QID:** 129

✓ **Correct** Marks: 2 / 2 Time Taken: 4 Seconds

Q: 2 The upward or down ward movement of shoot and root respectively is influenced by gravity. Such movement is called

ଶୁଟ୍ ଏବଂ ମୂଳର ଉପର କିମ୍ବା ତଳ ୱାର୍ଡ ଗତି ଯଥାକ୍ରମେ ମାଧ୍ୟାକର୍ଷଣ ଦ୍ୱାରା ପ୍ରଭାବିତ ହୁଏ | ଏହିପରି ପ୍ରତିକ୍ରିୟାକୁ କୁହାଯାଏ.....

A. Gravitism
✓ Your Ans **B.** Geotropism
C. Gravitytropism
D. Gravity movement

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 116

✓ **Correct** Marks: 2 / 2 Time Taken: 11 Seconds

Q: 3 If a mark, of size 0.2 cm made on the surface of glass sphere of diameter 10 cm and μ = 1.5 is viewed through the diametrically opposite point, where will the image be seen and of what size?
ଯଦି ୨ cm ସେମି ଆକାରର ଏକ ଚିହ୍ନ μ = 1.5 ର କାଚ ପରିସର ଉପରେ ନିର୍ମିତ ହୁଏ ଯାହାର ବ୍ୟାସାର୍ଦ୍ଧ 10 ସେମି , ଯାହାକି ବ୍ୟାସ ଆକାରରେ ବିପରୀତ ବିନ୍ଦୁ ମାଧ୍ୟମରେ ଦେଖାଯାଏ, ତେବେ ଚିତ୍ର କେଉଁଠାରେ ଦେଖାଯିବ ଏବଂ କେଉଁ ଆକାରର?

A. 0.2 cm

✓ Your Ans **B.** 0.6 cm

C. 0.4 cm

D. 0.8 cm

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 119

✓ **Correct** Marks: 2 / 2 Time Taken: 14 Seconds

Q: 4 Choose the incorrect statement
ଭୁଲ ଷ୍ଟେଟମେଣ୍ଟ ବାଛନ୍ତୁ

A. We are encouraged to plant more trees so as to ensure clean environment and also provide bio-mass fuel

B. Gober-gas is produced when crops, vegetable wastes etc., decompose in the absence of oxygen

✓ Your Ans **C.** The main ingredient of bio-gas is ethane and it gives a lot of smoke and also produces a lot of residual ash

D. Bio-mass is a renewable source of energy

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 115

✓ **Correct** Marks: 2 / 2 Time Taken: 13 Seconds

Q: 5 A ray of light travelling inside a rectangular glass block of refractive index 2 is incident on the glass-air surface at an angle of incidence of 45^0. The refractive index of air is 1.

Under these conditions the ray

ପ୍ରତୀକାତ୍ମକ ସୂଚକାଙ୍କ 2 ର ଏକ ଆୟତାକାର ଗ୍ଲାସ୍ ବ୍ଲକ୍ ଭିତରେ ଆଲୋକର ଏକ କିରଣ ଗ୍ଲାସ୍-ବାୟୁ ର ପୃଷ୍ଠରେ 45^0 କୋଣରେ ଘଟଣା ଘଟିଥାଏ | ବାୟୁର ପ୍ରତୀକାତ୍ମକ ସୂଚକାଙ୍କ ହେଉଛି 1 |

ଏହି ପରିସ୍ଥିତିରେ କିରଣ .....

A. Will emerge into the air without any deviation

B. Will be reflected back into the glass

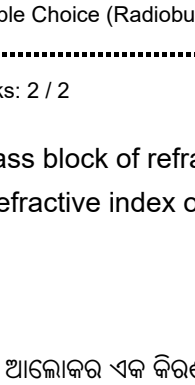
C. Will be absorbed

✓ Your Ans **D.** Will emerge into the air with an angle of refraction equal to 90^0

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 110

✓ **Correct** Marks: 2 / 2 Time Taken: 2 Seconds

Q: 6 What is the vertical spacing between the two consecutive turns?
କ୍ରମାଗତ ଦୁଇଟି ମୋଡ଼ ମଧ୍ୟରେ ଭୂଲମ୍ବ ବ୍ୟବଧାନ କେତେ ?



A. $\frac{h}{\sqrt{n}}cm$

✓ Your Ans **B.** $\frac{h}{n}cm$

C. can't be determined

D. $\frac{h}{n^2}cm$

Section: MATH **Question Type:** Multiple Choice (Radiobutton) **QID:** 135

✓ **Correct** Marks: 2 / 2 Time Taken: 3 Seconds

Q: 7 64 cells, each of e.m.f. 2 volt and internal resistance 2μ are connected to supply a maximum current through an external resistance of $8\times10^3\mu$. Then the cells must be connected in
64 ଟି କକ୍ଷ, ପ୍ରତ୍ୟେକଟି ଯଥା। 2 ଭୋଲ୍ଟ ଏବଂ ଆଭ୍ୟନ୍ତରୀଣ ପ୍ରତିରୋଧ 2μ ବାହ୍ୟ ପ୍ରତିରୋଧ $8 \times 10^3\mu$ ର ମାଧ୍ୟମରେ ସର୍ବାଧିକ କରେଣ୍ଟ ଯୋଗାଇବା ପାଇଁ ସଂଯୁକ୍ତ | ତା'ପରେ କକ୍ଷଗୁଡ଼ିକ କେଉଁପରି ସଂଯୁକ୍ତ ହେବା ଜରୁରୀ ?

A. Series only

✓ Your Ans **B.** Parallel only

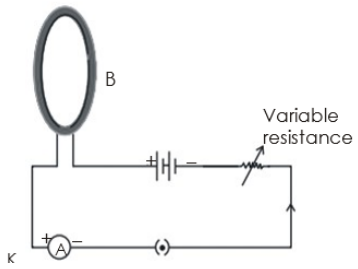
C. Any of the above three combinations

D. Mixed series and parallel arrangement

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 118

✓ **Correct** Marks: 2 / 2 Time Taken: 2 Seconds

Q: 8 A circular loop placed in a plane perpendicular to the plane of paper carries a current when the key is ON. The current as seen from points A and B (in the plane of paper and on the axis of the coil) is anti-clockwise and clockwise respectively. The magnetic field lines point from B to A. The N-pole of the resultant magnet is on the face close to
ଚାବି ଅନ୍ ଥିବାବେଳେ ପେପରର ବିମାନରେ ଉର୍ଦ୍ଧ୍ୱରେ ଥିବା ଏକ ବୃତ୍ତାକାର ଲୁପ୍ ଏକ କରେଣ୍ଟ ବହନ କରେ | ପଏଣ୍ଟ A ଏବଂ B ରୁ ଦେଖାଯାଉଥିବା କରେଣ୍ଟ (କାଗଜର ସମତଳ ଏବଂ କୋଇଲର ଅକ୍ଷରେ) ଯଥାକ୍ରମେ ଘଣ୍ଟା ବିରୋଧୀ ଦିଗରେ ଏବଂ ଘଣ୍ଟା ଦିଗରେ | ଚୁମ୍ବକୀୟ କ୍ଷେତ୍ର ରେଖା B ରୁ A କୁ ସୂଚିତ କରେ | ଫଳାଫଳ ଚୁମ୍ବକର N- ପୋଲ କାହା ମୁହଁରେ ଅଛି ...



A. A

B. B

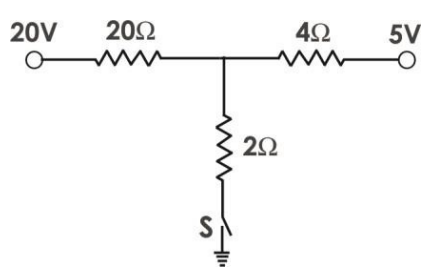
C. A if the current is small, and B if the current is large

✓ Your Ans **D.** B if the current is small and A if the current is large

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 112

✓ **Correct** Marks: 2 / 2 Time Taken: 10 Seconds

Q: 9 As the switch S is closed in the circuit shown in figure, find the current passed through it
ଚିତ୍ରରେ ଦେଖାଯାଇଥିବା ସର୍କିଟରେ ସୁଇଚ୍ S ବନ୍ଦ ଥିବାରୁ, ଏହା ଦେଇ ଯାଇଥିବା କରେଣ୍ଟକୁ ଖୋଜ |



A. 4.4A

✓ Your Ans **B.** 4.5

C. 5.4

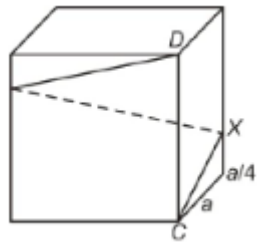
D. 5.5

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 108

✓ **Correct** Marks: 2 / 2 Time Taken: 11 Seconds

Q: 10 The same string, when wound on the exterior four walls of a cube of side n cm, starting at point C and ending at point D, can give exactly one turn (see figure, not drawn to scale). The length of the string is

ସମାନ ଷ୍ଟ୍ରିଙ୍ଗ୍, ଯେତେବେଳେ ସାଇଡ୍ n ସେମିର ଏକ କ୍ୟୁବ୍ ର ବାହ୍ୟ ଚାରି କାନ୍ଥରେ କ୍ଷତ ହୁଏ, C ବିନ୍ଦୁରୁ ଆରମ୍ଭ ହୋଇ D ପଏଣ୍ଟରେ ଶେଷ ହୁଏ, ଠିକ୍ ଗୋଟିଏ ମୋଡ଼ ଦେଇପାରେ (ଚିତ୍ର ଦେଖନ୍ତୁ, ସ୍କେଲ୍ରୁ ଟାଣିନଥାଏ) | ଷ୍ଟ୍ରିଙ୍ଗର ଲମ୍ବ ହେଉଛି



✓ Your Ans **A.** $\sqrt{17}n\ cm$

B. $\sqrt{2}n\ cm$

C. $n\ cm$

D. $\sqrt{13}n\ cm$

Section: MATH **Question Type:** Multiple Choice (Radiobutton) **QID:** 136

✓ **Correct** Marks: 2 / 2 Time Taken: 10 Seconds

Q: 11 A point object O is placed on the principal axis of a convex lens of focal length 20 cm at a distance of 40 cm to the left of it. The diameter of the lens is 10 cm. If the eye is placed 60 cm to the right of the lens at a distance h below the principal axis, then the maximum value of h to see the image will be
ଏକ ପଏଣ୍ଟ ବସ୍ତୁ O ଏହାର ବାମ ପାର୍ଶ୍ୱରେ 40 ସେମି ଦୂରରେ ଫୋକାଲ ଲମ୍ବ 20 ସେମି ବିଶିଷ୍ଟ ଏକ କନଭକ୍ସ ଲେନ୍ସର ମୁଖ୍ୟ ଅକ୍ଷରେ ରଖାଯାଇଛି | ଲେନ୍ସର ବ୍ୟାସ 10 ସେମି | ଯଦି ଆଖିକୁ ମୂଖ୍ୟ ଅକ୍ଷଠାରୁ h ଦୂରତାରେ ଲେନ୍ସର ଡାହାଣକୁ 60 ସେମି ରଖାଯାଏ, ତେବେ ପ୍ରତିଛବି ଦେଖିବା ପାଇଁ h ର ସର୍ବାଧିକ ମୂଲ୍ୟ ହେବ .....

A. 0

B. 5

✓ Your Ans **C.** 2.5

D. 10

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 109

✓ **Correct** Marks: 2 / 2 Time Taken: 7 Seconds

Q: 12 Consider two different cloth-cutting processes. In the first one, n circular cloth pieces are cut from a square cloth piece of side a in the following steps: the original square of side a is divided into n smaller squares, not necessarily of the same size, then a circle of maximum possible area is cut from each of the smaller squares. In the second process, only one circle of maximum possible area is cut from the square of side a and the process ends there. The cloth pieces remaining after cutting the circles are scrapped in both the processes. The ratio of the total area of scrap cloth generated in the former to that in the latter is

ଦୁଇଟି ଭିନ୍ନ କପଡା କାଟିବା ପ୍ରକ୍ରିୟାକୁ ବିଚାର କରନ୍ତୁ | ପ୍ରଥମଟିରେ, n ବୃତ୍ତାକାର କପଡା ଖଣ୍ଡଗୁଡ଼ିକ ନିମ୍ନ ପର୍ଯ୍ୟାୟରେ ଏକ ବର୍ଗର କପଡା ଖଣ୍ଡରୁ କଟାଯାଇଥାଏ: ପାର୍ଶ୍ୱର ମୂଳ ବର୍ଗକୁ n ଛୋଟ ବର୍ଗରେ ବିଭକ୍ତ କରାଯାଇଛି, ସମାନ ଆକାରର ନୁହେଁ, ତାପରେ ସର୍ବାଧିକ ସମ୍ଭାବ୍ୟ ବୃତ୍ତ | ପ୍ରତ୍ୟେକ ଛୋଟ ବର୍ଗରୁ କ୍ଷେତ୍ର କଟାଯାଇଥାଏ | ଦ୍ୱିତୀୟ ପ୍ରକ୍ରିୟାରେ, ସର୍ବାଧିକ ସମ୍ଭାବ୍ୟ କ୍ଷେତ୍ରର କେବଳ ଗୋଟିଏ ସର୍କଲ୍ ପାର୍ଶ୍ୱର ବର୍ଗରୁ କଟାଯାଇଥାଏ ଏବଂ ପ୍ରକ୍ରିୟା ସେଠାରେ ଶେଷ ହୁଏ | ବୃତ୍ତ କାଟିବା ପରେ ଅବଶିଷ୍ଟ କପଡା ଖଣ୍ଡଗୁଡ଼ିକ ଉଭୟ ପ୍ରକ୍ରିୟାରେ ସ୍କ୍ରାପ୍ ହୋଇଯାଏ | ପୂର୍ବରେ ସୃଷ୍ଟି ହୋଇଥିବା ସ୍କ୍ରାପ୍ କପଡ଼ାର ସମୁଦାୟ କ୍ଷେତ୍ରର ଅନୁପାତ ହେଉଛି |

✓ Your Ans **A.** $1:1$

B. $\sqrt{2}:1$

C. $\dfrac{n\,(4-\pi)}{4n-\pi}$

D. $\dfrac{4n-\pi}{n\,(4-\pi)}$

Section: MATH **Question Type:** Multiple Choice (Radiobutton) **QID:** 134

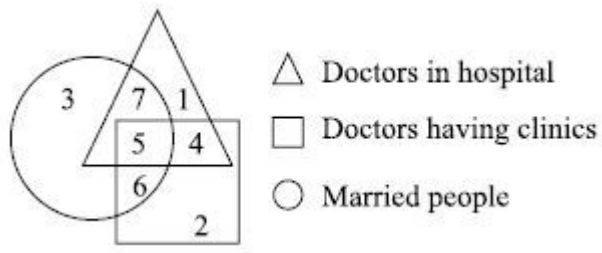
✓ **Correct** Marks: 2 / 2 Time Taken: 4 Seconds

Q: 13 Study the given figure carefully.

What is represented by the number 7?

ପ୍ରଦତ୍ତ ଚିତ୍ରକୁ ଯତ୍ନର ସହିତ ଅଧ୍ୟୟନ କରନ୍ତୁ |

ସଂଖ୍ୟା 7 ଦ୍ୱାରା କେତେ ପ୍ରତିନିଧିତ୍ୱ ହୋଇଛି?



✓ Your Ans **A.** Married doctors in the hospital

B. Doctors having clinics

C. Unmarried doctors having clinics

D. Married doctors having clinics

Section: APPTITUDE **Question Type:** Multiple Choice (Radiobutton) **QID:** 131

✓ **Correct** Marks: 2 / 2 Time Taken: 12 Seconds

Q: 14 Nuclear fusion reactions happens spontaneously in _____

_____ ରେ ଆଣବିକ ଫ୍ୟୁଜନ୍ ପ୍ରତିକ୍ରିୟା ସ୍ୱତ ଭାବରେ ଘଟେ |

A. The core of the earth

B. The eruption of a volcano

C. The atmosphere of the sun

✓ Your Ans **D.** The commercial nuclear reactor

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 124

✓ **Correct** Marks: 2 / 2 Time Taken: 11 Seconds

Q: 15 In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?
ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ ଷ୍ଟୋର୍‌ରେ ଲାଭ ହେଉଛି ମୂଲ୍ୟର 320% | ଯଦି ମୂଲ୍ୟ 25% ବୃଦ୍ଧି ହୁଏ କିନ୍ତୁ ବିକ୍ରୟ ମୂଲ୍ୟ ସ୍ଥିର ରହିଥାଏ, ବିକ୍ରୟ ମୂଲ୍ୟର ପ୍ରାୟ କେତେ ପ୍ରତିଶତ ଲାଭ?

A. 30%

✓ Your Ans **B.** 70%

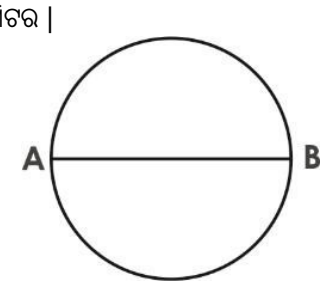
C. 250%

D. 100%

Section: APPTITUDE **Question Type:** Multiple Choice (Radiobutton) **QID:** 133

✓ **Correct** Marks: 2 / 2 Time Taken: 12 Seconds

Q: 16 In the figure given below, find the resistance between points A and B. Both the circle and the diameter are made of uniform wire of resistance 1×10^{-4} ohm per metre. The length AB is 2 metre
ନିମ୍ନରେ ଦିଆଯାଇଥିବା ଚିତ୍ରରେ, ପଏଣ୍ଟ A ଏବଂ B ମଧ୍ୟରେ ଥିବା ପ୍ରତିରୋଧକୁ ଖୋଜ | ଉଭୟ ବୃତ୍ତ ଏବଂ ବ୍ୟାସ ପ୍ରତି ମିଟରରେ 1×10^{-4} ଓମ୍ ପ୍ରତିରୋଧର ସମାନ ତାରରେ ତିଆରି | AB ର ଲମ୍ବ 2 ମିଟର |



A. $\frac{2}{3} \times 10^{-4}\text{ohm}$

B. $2\pi \times 10^{-4}\text{ohm}$

C. $14.56 \times 10^{-4}\text{ohm}$

✓ Your Ans **D.** $0.88 \times 10^{-4}\text{ohm}$

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 111

✓ **Correct** Marks: 2 / 2 Time Taken: 10 Seconds

Q: 17 A car is being driven, in a straight line and at a uniform speed, towards the base of a vertical tower. The top of the tower is observed from the car and, in the process, it takes 10 min for the angle of elevation to change from 45° to 60°. After how much more time will this car reach the base of the tower?

ଏକ କାର୍ ଏକ ସିଧା ଲାଇନରେ ଏବଂ ସମାନ ବେଗରେ, ଏକ ଭୂଲମ୍ବ ଟାୱାର ମୂଳ ଆଡକୁ ଚାଳିତ | ଟାୱାରର ଉପର ଅଂଶ କାରରୁ ଦେଖାଯାଏ ଏବଂ ଏହି ପ୍ରକ୍ରିୟାରେ ଉଚ୍ଚତାର କୋଣ 45° ରୁ 60° ପର୍ଯ୍ୟନ୍ତ ପରିବର୍ତ୍ତନ ପାଇଁ 10 ମିନିଟ୍ ଲାଗେ | କେତେ ସମୟ ପରେ ଏହି କାର ଟାୱାର ମୂଳରେ ପହଞ୍ଚିବ?

A. $7\left(\sqrt{3}-1\right)$

B. $6\left(\sqrt{3}+\sqrt{2}\right)$

C. $8\left(\sqrt{3}-\sqrt{2}\right)$

✓ Your Ans **D.** $5\left(\sqrt{3}+1\right)$

Section: MATH **Question Type:** Multiple Choice (Radiobutton) **QID:** 137

✓ **Correct** Marks: 2 / 2 Time Taken: 9 Seconds

Q: 18 Currents of 10 ampere and 2 ampere are passed through two parallel wires A and B respectively in opposite directions. If the wire A is infinitely long and the length of the wire B is 2 metre, the force on the conductor B, which is situated at 10 cm. distance from A will be
10 ଆମ୍ପେର୍ ଏବଂ 2 ଆମ୍ପେର୍ ର ସ୍ରୋତ ଦୁଇଟି ସମାନ୍ତରାଳ ତାର ଏବଂ ଯଥାକ୍ରମେ ବିପରୀତ ଦିଗରେ ଗତି କରେ | ଯଦି ତାର A ଅସୀମ ଲମ୍ବା ଏବଂ ତାର B ଦୈର୍ଘ୍ୟ 2 ମିଟର, ବଳ ଯାହାକି କଣ୍ଡକ୍ଟର B ଉପରେ 10 ସେମିରେ ଅବସ୍ଥିତ | A ରୁ ଦୂରତା ହେବ .....

✓ Your Ans **A.** 8×10^{-5} newton

B. 4×10^{-5} newton

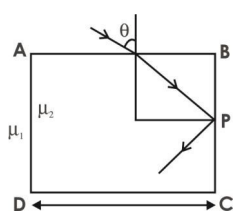
C. $8\pi \times 10^{-5}$ newton

D. $4\pi \times 10^{-5}$ newton

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 114

✓ **Correct** Marks: 2 / 2 Time Taken: 4 Seconds

Q: 19 A cube of side is made of material of refractive index μ_2 is immersed in a liquid of refractive index μ_1 . A ray is incident on face AB an angle θ as shown. Total internal reflection just takes place at point B on face BC, then
ପାର୍ଶ୍ୱ ର ଏକ କ୍ୟୁବ୍ ପ୍ରତୀକାତ୍ମକ ସୂଚକାଙ୍କ ପଦାର୍ଥରେ ନିର୍ମିତ μ_2 ପ୍ରତୀକାତ୍ମକ ସୂଚକାଙ୍କ μ_1 ତରଳ ପଦାର୍ଥରେ ବୁଡିଯାଏ | ଏକ ରଶ୍ମୀ AB ଉପରେ ଗୋଟେ କୋଣ θ କରୁଅଛି | ସମୁଦାୟ ଆଭ୍ୟନ୍ତରୀଣ ପ୍ରତିଫଳନ କେବଳ BC ମୁହଁରେ B ପଏଣ୍ଟରେ ହୁଏ |



A. $\sin\theta = \frac{\mu_2}{\mu_1}$

B. $\sin\theta = \sqrt{\left[\left(\frac{\mu_2}{\mu_1}\right)^2 + 1\right]}$

C. $\sin\theta = \sqrt{\left[\left(\frac{\mu_1}{\mu_2}\right)^2 - 1\right]}$

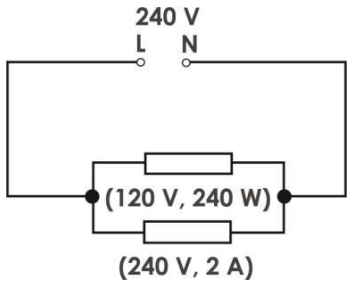
✓ Your Ans **D.** $\sin\theta = \sqrt{\left[\left(\frac{\mu_2}{\mu_1}\right)^2 - 1\right]}$

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 117

✓ **Correct** Marks: 2 / 2 Time Taken: 3 Seconds

Q: 20 Two appliances marked “240 V, 2 A” and “120 V, 240 W” are being connected in parallel to a 240 V supply. Assuming that the appliances did not blow, what is the total power consumption of the appliances?

“240 V, 2 A” ଏବଂ “120 V, 240 W” ଚିହ୍ନିତ ଦୁଇଟି ଉପକରଣ 240 V ଯୋଗାଣ ସହିତ ସମାନ୍ତରାଳ ଭାବରେ ସଂଯୋଗ ହେଉଛି | ଧରାଯାଉ ଉପକରଣଗୁଡ଼ିକ ଉଡି ନାହିଁ, ଉପକରଣଗୁଡ଼ିକର ମୋଟ ଶକ୍ତି ବ୍ୟବହାର କେତେ ?



A. 1044

B. 4410

✓ Your Ans **C.** 1440

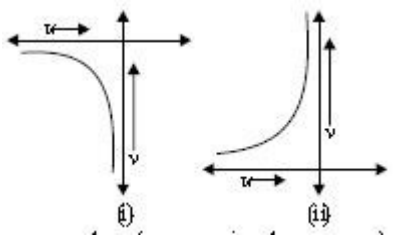
D. 4401

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 123

✓ **Correct** Marks: 2 / 2 Time Taken: 2 Seconds

Q: 21 Two v – u graphs are plotted using the new Cartesian sign conventions. Here v and u denote the distance of image and distance of object from pole (or optical centre) respectively

ଦୁଇଟି v - u ଗ୍ରାଫ୍ ନୂତନ କାର୍ଟେସିଆନ୍ ସାଇନ୍ କନଭେନସନ୍ ବ୍ୟବହାର କରି ଷଡଯନ୍ତ୍ର କରାଯାଇଛି | ଏଠାରେ v ଏବଂ u ଯଥାକ୍ରମେ ପୋଲ (କିମ୍ବା ଅପ୍ଟିକାଲ୍ ସେଣ୍ଟର୍) ରୁ ପ୍ରତିଛବିର ଦୂରତା ଏବଂ ବସ୍ତୁର ଦୂରତାକୁ ସୂଚିତ କରେ



A. Convex mirror - Convex lens

B. Convex mirror - Concave lens

C. Concave mirror - Concave lens

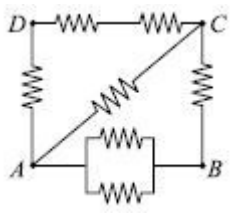
✓ Your Ans **D.** A. Concave mirror - Convex lens

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 126

✓ **Correct** Marks: 2 / 2 Time Taken: 2 Seconds

Q: 22 Seven identical resistors of resistance R each are connected as shown in the given figure

ପ୍ରତିରୋଧ R ର ସାତୋଟି ସମାନ ପ୍ରତିରୋଧକ ପ୍ରଦତ୍ତ ଚିତ୍ରରେ ଦେଖାଯାଇଥିବା ପରି ସଂଯୁକ୍ତ



A. $R_1 = R_2 > R_3$

✓ Your Ans **B.** $R_1 < R_2 > R_3$

C. $R_1 = R_2 < R_3$

D. $R_1 > R_2 < R_3$

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 128

✓ **Correct** Marks: 2 / 2 Time Taken: 2 Seconds

Q: 23 P, Q and R are long parallel straight wires in air, carrying currents as shown. What is the direction of the resultant force on Q?

P, Q ଏବଂ R ବାୟୁରେ ଲମ୍ବା ସମାନ୍ତରାଳ ସିଧା ତାର, ଦେଖାଯାଇଥିବା ପରି ସ୍ରୋତ ବହନ କରେ | Q ଉପରେ ଫଳାଫଳ ବଳର ଦିଗ କ'ଣ?

A. The same as that of current in Q

B. Perpendicular to this page

C. To the right

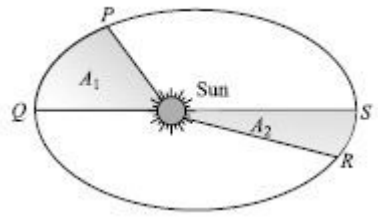
✓ Your Ans **D.** To the left

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 120

✓ **Correct** Marks: 2 / 2 Time Taken: 9 Seconds

Q: 24 The given figure shows the motion of a planet around the sun in an elliptical orbit with the sun at the focus. The shaded areas A1 and A2 shown in figure are such that A1 > A2. If t1 and t2 represent the time taken by the planet to move from P to Q and R to S respectively, then

ପ୍ରଦତ୍ତ ଚିତ୍ର ସୂର୍ଯ୍ୟଙ୍କ ଚାରିପାଖରେ ଏକ ଗ୍ରହର ଗତିକୁ ଏକ ଆଲେପଟିକାଲ୍ କକ୍ଷପଥରେ ସୂର୍ଯ୍ୟଙ୍କ ଫୋକସରେ ଦର୍ଶାଏ | ଚିତ୍ରରେ ଦେଖାଯାଇଥିବା ଛାୟା କ୍ଷେତ୍ର A_1 ଏବଂ A_2 ଏପରି ଯେ $A_1 > A_2$ | ଯଦି t_1 ଏବଂ t_2 ଯଥାକ୍ରମେ P ରୁ Q ଏବଂ R କୁ S କୁ ଯିବା ପାଇଁ ଗ୍ରହ ଦ୍ୱାରା ନିଆଯାଇଥିବା ସମୟକୁ ପ୍ରତିନିଧିତ୍ୱ କରେ, ତେବେ



✓ Your Ans **A.** t1 > t2

B. $t_1 = t_2$

C. $t_1 < t_2$

D. Data is insufficient

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 127

✓ **Correct** Marks: 2 / 2 Time Taken: 3 Seconds

Q: 25 5,24,340,1328,4910,_____?
୫,୨୪,୩୪୦,୧୩୨୮,୪୯୧୦,_____?

A. 12164

✓ Your Ans **B.** 6856

C. 12167

D. 5832

Section: APPTITUDE **Question Type:** Multiple Choice (Radiobutton) **QID:** 132

✓ **Correct** Marks: 2 / 2 Time Taken: 1 Second

Q: 26 . If '–' stands for 'division', '+' for 'multiplication', '÷' for 'subtraction' and '×' for 'addition', then which of the following options is correct?

ଯଦି '-' 'ବିଭାଜନ', 'ଗୁଣନ' ପାଇଁ '+', 'ବିଚ୍ଛିନ୍ନତା' ପାଇଁ '÷' ଏବଂ 'ଯୋଗ' ପାଇଁ '×' ଥାଏ, ତେବେ ନିମ୍ନଲିଖିତ ବିକଳ୍ପଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁଟି ସଠିକ୍?

A. 6 + 20 – 12 ÷ 7 – 1 = 38

✓ Your Ans **B.** 6 ÷ 20 × 12 + 7 – 1 = 70

C. 6 – 20 ÷ 12 × 7 + 1 = 57

D. 6 + 20 – 12 ÷ 7 × 1 = 62

Section: APPTITUDE **Question Type:** Multiple Choice (Radiobutton) **QID:** 130

✓ **Correct** Marks: 2 / 2 Time Taken: 9 Seconds

Q: 27 The total current through a neon discharge tube, in which 3.3×10^{18} Ne+ ions travel towards the right per second while 1.2×10^{18} electrons travel towards the left, through a particular cross-section, is

ଏକ ନିୟନ ଡିସଚାର୍ଜ ଟ୍ୟୁବ୍ ମାଧ୍ୟମରେ ସମୁଦାୟ କରେଣ୍ଟ, ଯେଉଁଥିରେ 3.3×10^{18} Ne+ ଆୟନ ପ୍ରତି ସେକେଣ୍ଡରେ ଡାହାଣ ଆଡକୁ ଯାତ୍ରା କରୁଥିବାବେଳେ 1.2×10^{18} ଇଲେକଟ୍ରନ ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ କ୍ରସ୍ ବିଭାଗ ଦେଇ ବାମ ଆଡକୁ ଯାତ୍ରା କରନ୍ତି ..

A. 0.36A

✓ Your Ans **B.** 0.72A

C. 0.12A

D. 0.24A

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 113

✓ **Correct** Marks: 2 / 2 Time Taken: 10 Seconds

Q: 28 Two concentric coplanar circular loops of radii r_1 and r_2 carry currents of respectively I_1 and I_2 in opposite directions (one clockwise and other anticlockwise). The magnetic induction at the centre of the loops is half due to I_1 alone at the centre. If $r_2 = 2r_1$, the value of I_2/ I_1 is

ବ୍ୟାସାର୍ଦ୍ଧ r_1 ଏବଂ r_2 ର ଦୁଇଟି ଏକାଗ୍ର କପ୍ଲାନାର୍ ସର୍କୁଲାର୍ ଲୁପ୍ ଯଥାକ୍ରମେ I_1 ଏବଂ I_2 ର ସ୍ରୋତକୁ ବିପରୀତ ଦିଗରେ ବହନ କରେ (ଗୋଟିଏ ଘଣ୍ଟା କଣ୍ଟା ଦିଗରେ ଓ ଅନ୍ୟଟି ଘଣ୍ଟା କଣ୍ଟା ବିପରୀତ ଦିଗରେ) | ଲୁପ୍ ମଝିରେ ଥିବା ଚୁମ୍ବକୀୟ ଇନଡକ୍ସନ୍ କେବଳ I_1 କାରଣରୁ କେନ୍ଦ୍ରରେ ଅଧା | ଯଦି $r_2 = 2r_1$, I_2 / I_1 ର ମୂଲ୍ୟ ହେଉଛି .....

✓ Your Ans **A.** 1

B. 1/2

C. 2

D. 1/4

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 121

✓ **Correct** Marks: 2 / 2 Time Taken: 19 Seconds

Q: 29 An ammeter reads 500 mA. When a shunt of 0.1Ω is connected across the ammeter its reading drops to 50 mA. The resistance of the ammeter is

ଏକ ଆମ୍ମିଟର 500 mA ସୂଚାଏ | ଯେତେବେଳେ 0.1Ω ର ଏକ ଶଣ୍ଟ ଆମ୍ମିଟରରେ ସଂଯୁକ୍ତ, ଏହାର ପଠନ 50 mA କୁ ଖସିଯାଏ | ଆମ୍ମିଟରର ପ୍ରତିରୋଧ ହେଉଛି

A. 1Ω

✓ Your Ans **B.** 0.9Ω

C. 1.1Ω

D. 2.9Ω

Section: PHYSICS **Question Type:** Multiple Choice (Radiobutton) **QID:** 122

✓ **Correct** Marks: 2 / 2 Time Taken: 11 Seconds

Q: 30 If both a and b belong to the set {1, 2, 3, 4}, then the number of equations of the format $x_2 + bx + 1 = 0$ having real roots is

ଯଦି ଉଭୟ a ଏବଂ b ଉଭୟ ସେଟ {1, 2, 3, 4} ରେ ସମ୍ପୃକ୍ତ , ତେବେ ପ୍ରକୃତ ମୂଳ ଥିବା $x_2 + bx + 1 = 0$ ଫର୍ମାଟର ସମୀକରଣ ସଂଖ୍ୟା କେତେ ?

A. 10

B. 6

✓ Your Ans **C.** 7

D. 12

Section: MATH **Question Type:** Multiple Choice (Radiobutton) **QID:** 138