



PHYSICS

BOOKS - HT Olympiad Previous Year Paper

NSO QUESTION PAPER 2019-20 SET A

Science

1. Read the given statements and select the correct option.

Statement 1: Rechargeable batteries can be discharged by providing them suitable current. Statement 2: In a bulb, the filament is broken when a large current (beyond reference level) is passed through the bulb.

A. Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.

B. Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.

C. Statement 1 is true but statement 2 is false.

D. Statement 1 is false but statement 2 is true.

Answer: D



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2. Which of the following statements is/are correct?

I. Thermometer is read by holding its bulb. II. A

few sharp jerks are given to clinical thermometer before using it. III. Black fabric is preferred during winter. IV. Shopkeepers selling ice blocks usually cover them with jute sacks.

A. I only

B. II and III only C

C. III and IV only

D. II, III and IV only

Answer: D



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3. A body moves with uniform velocity. Which of the given options shown here is a graph of velocity against time for this motion?



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4. Priyanka wishes to take pictures without being noticed. She sets up two plane mirrors together with her camera. Which arrangement

of mirrors will allow Priyanka to take pictures of someone behind the camera?



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5. Fill in the following blanks with suitable words :

Air moves from a region of _____ pressure to a region of _____ pressure .

A. II only

B. III only

C. I and III only

D. II and III only

Answer: C



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6. One of the four identical light bulbs in a series circuit has blown off as shown in the figure.



Which of the following statements is correct about the bulbs?

A. Z will not glow while W. X and Y will glow as before.

B. Z will not glow while W. X and Y will glow brighter than before.

C. Z will glow brighter than before while W, X and Y will glow as before.

D. None of the bulbs will glow.

Answer: D



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7. A magnet II is being moved slowly towards another magnet I which has attracted steel pins as shown in the figure. The strings of attracted pins ____



- A. Remains stationary
- B. Gets attracted to the right
- C. Gets repelled to the left

D. None of these

Answer: C



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8. Match column I with column II and select the correct option from the given codes.



A. (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)

B. (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)

C. (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)

D. (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)

Answer: B



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Achievers Section

1. Study the displacement time graph of a toy car given here and choose the correct statements from the following.



I. The toy car is the fastest during the first 10 seconds. II. The toy car is the slowest in between 10 seconds and 20 seconds. III. Distance travelled by the car is 3 m during the time interval 30 seconds to 40 seconds. IV. Total distance covered by the toy car is 10 m.

- A. I and II only
- B. III and IV only
- C. I, II and III only
- D. I, II, III and IV

Answer: C



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