

22. Which of the following is not conservative force

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| <u>A.</u> friction | <u>B.</u> electric |
| <u>C.</u> gravitational | <u>D.</u> magnetic |

Answer: Option A

23. Work has the dimension as that of same as that of

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|---------------------------|----------------------------|
| <u>A.</u> torque | <u>B.</u> angular momentum |
| <u>C.</u> linear momentum | <u>D.</u> power |

Answer: Option A

24. The consumption of energy by a 60 watt bulb in 2 sec is

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| <u>A.</u> 120 J | <u>B.</u> 60 J |
| <u>C.</u> 30 J | <u>D.</u> 0.02 J |

Answer: Option A

25. The relation between the escape velocity V_{esc} and orbital speed V_o is given by

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|-------------------------------|------------------------------------|
| <u>A.</u> $V_{esc} = 1/2 V_o$ | <u>B.</u> $V_{esc} = \sqrt{2} V_o$ |
| <u>C.</u> $V_{esc} = V_o$ | <u>D.</u> $V_{esc} = 2V_o$ |

Answer: Option B

26. The escape velocity from the earth surface in km S-1 is

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|----------------------|----------------------|
| <u>A.</u> 4.2 km S-1 | <u>B.</u> 7.5 km S-1 |
| <u>C.</u> 9.5 km S-1 | <u>D.</u> 1.1 km S-1 |

Answer: Option D

27. If moon radius is 1600 km and g on its surface is 1.6 ms-2 then the escape velocity on the moon is

- A. 1600 ms^{-1} B. 50.6 ms^{-1}
C. 71.6 ms^{-1} D. 2263 ms^{-1}

Answer: Option B

28. When two protons are brought together

- A. Kinetic energy increases B. P.E. between them increases
C. P.E. between them decreases D. P.E. between them does not change

Answer: Option B

29. When arrow is released from its bow, its energy is transformed from

- A. heat energy to K.E B. elastic P.E to K.E
C. chemical energy to elastic P.E D. K.E to elastic P.E.

Answer: Option B

30. A man lifts vertically a weight of 40kg through 1m in 10s; while a child lifts vertically a weight of 10kg through a distance of 1m in 1s. What will be correct inference?

- A. man does more work than child B. child does more work than man
C. both do the same amount of work D. it is a foolish question

Answer: Option B