

# O P JINDAL SCHOOL, SAVITRINAGAR

## CLASS TEST & PRACTICE

### ANSWER KEY

CLASS X PHYSICS

TOPIC : MAGNETIC EFFECT  
OF CURRENT AND  
MAGNETISM

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- 1 In the following questions, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternative from the following:
- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
  - (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion. 1
  - (c) Assertion is true but the Reason is false.
  - (d) The statement of the Assertion is false but the Reason is true. Assertion: It is easier to bring North pole of a magnet to South pole of other magnet.  
Reason: There is a force of attraction between unlike poles of magnet.
- ANS: (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- 2 \_\_\_\_\_ is the commercial unit of electrical energy. 1
- ANS: kilowatt hour
- 3 The touching of the live wire and neutral wire directly is known as \_\_\_\_\_. 1
- ANS: short circuit
- 4 A D.C. generator is based on the principle of \_\_\_\_\_. 1
- ANS: electromagnetic induction
- 5 \_\_\_\_\_generators are used in power stations to generate electricity which is supplied to our homes. 1
- ANS: A.C.
- 6 A \_\_\_\_\_ works on the principle that when a rectangular coil is placed in a magnetic field and current is passed through it, a force acts on the coil which rotates it continuously. 1
- ANS: motor
- 7 When North pole approaches a coil, the front side of the coil will show an \_\_\_\_\_ current. 1
- ANS: anticlockwise
- 8 By sending current through a coil wound round a rod one can magnetise it permanently. [True/False] 1
- ANS: False

9 The rate of change in magnetic flux produces induced emf or potential. [True/False] 1

ANS: True

10 In ideal conditions, green colour insulation is given for live wire. [True/False] 1

ANS: False

11 Over-loading is caused by connecting many devices to one supply point. [True/False] 1

ANS: True

12 Potential of the earthed wire is zero.  
[True/False] 1

ANS: True

13 When a magnet is moved with its north polarity towards a coil placed in a closed circuit, then the nearest face of the coil shows north polarity. [True/False] 1

ANS: True

14 When a coil and magnet both are stationary an induced emf is setup across the coil. [True/False] 1

ANS: False

15 Match Column I with Column II.

Column I	Column II
(i) Electric motor	(A) Electromagnet
(ii) Solenoid	(B) Heating effect of electric current
(iii) Safety Fuses	(C) Electrical energy to mechanical energy
(iv) Electric generator	(D) Electromagnetic induction

ANS: (i) → (C), (ii) → (A), (iii) → (B), (iv) → (D)

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