



# ACADEMIC WORLD SCHOOL™

## BEMETARA

### SUMMER VACATION ASSIGNMENT

### SESSION 2020-21

### CLASS: X

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#### **SUBJECT- SCIENCE(PHYSICS)**

#### **General Instructions:**

1. *Make one notebook of science and do all the parts in one copy only.*
  2. *Do all question of one section together at one place.*
  3. *The vacation work is expected to be in a creative and presentable shape.*
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1. Draw the shape of magnetic field lines around a straight conductor.
  2. What is the resistance of a 12 m long steel wire whose cross-sectional area is 2 sq. mm?  
 $(\rho)_{\text{steel}} = 2.4 \times 10^{-6} \Omega\text{m}$
  3. Explain the following
    - (a) Tungsten is used for making the filament of the bulb.
    - (b) The heating elements of heating devices such as bread-toaster and geyser etc. made up of alloys rather than a pure metal.
  4. Two wires of same material have their lengths in ratio 1:4 and the ratio of the area of cross section is 1:2. Find the ratio of resistances of the wires?
  5. Write an experiment to find the shape of magnetic field around a current carrying circular wire. Draw the shape of magnetic field lines around a current carrying circular loop.
  6. How does a fuse wire help to protect the electrical appliances in your house
  7. How much energy is given to each coulomb of charge passing through a 6 V battery?
  8. What are the main reasons that cause overloading on domestic electric wires?
  9. Write the experiment in which you can get induced current due to electromagnetic induction  
( experiment No 13.9 NCERT book)
  10. What is the principle of working of an electric motor?