

CBT SCIENCE (NOVEMBER) 2024

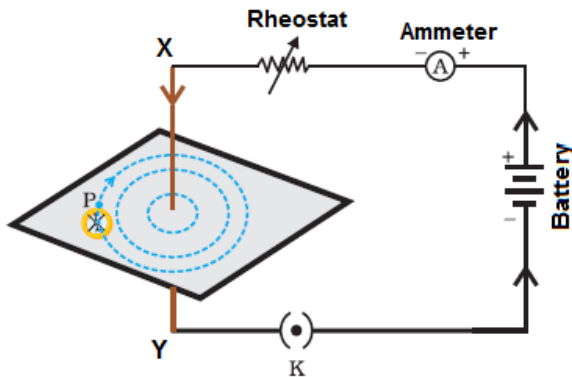
CLASS – 10

Q1 Which of the following pattern correctly describes the magnetic field around a long straight wire carrying current.

- (a) lines perpendicular to wire Straight
- (b) Straight lines parallel to wire
- (c) Radial lines originating from the wire
- (d) Concentric circles centered around the wire

Correct Answer: (d)

Feedback:



Q2 Force on a current carrying conductor in a magnetic field depends on

- (a) Direction of current only
- (b) Direction of magnetic field
- (c) Both (a) and (b)
- (d) Length of wire

Correct Answer : (c)

Q3 To avoid risk of electrical shock which phenomenon is used

- (a) Overloading
- (b) Short circuiting

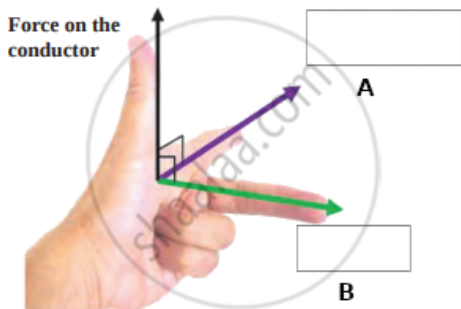
(c) Earthing

(d) Using Stabilisers

Correct Answer : (c)

Feedback: Earthing is to connect the metal case of the appliance to earth by means of a metal wire called Earth wire . On end of metal wire is buried in the earth . In case of leakage of current, it is diverted towards earth.

Q4 What does **A** and **B** indicate in the given figure.



(a) A- Current, B-Magnetic Field

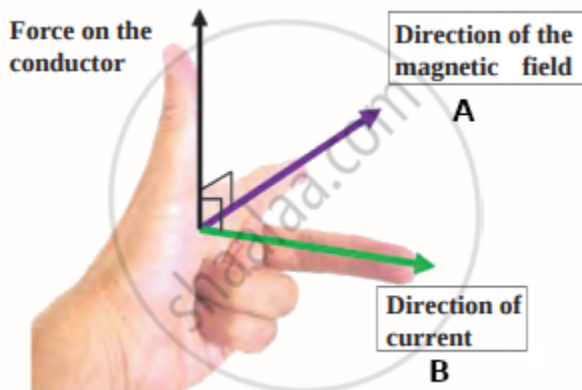
(b) A- Magnetic field, B- Current

(c) A- Motion. B- Current

(d) A- Current, B- Motion

Correct Answer: (b)

Feedback :



Q5 Assertion (A): On freely suspending a current carrying solenoid it comes to rest in geographical N-S direction,

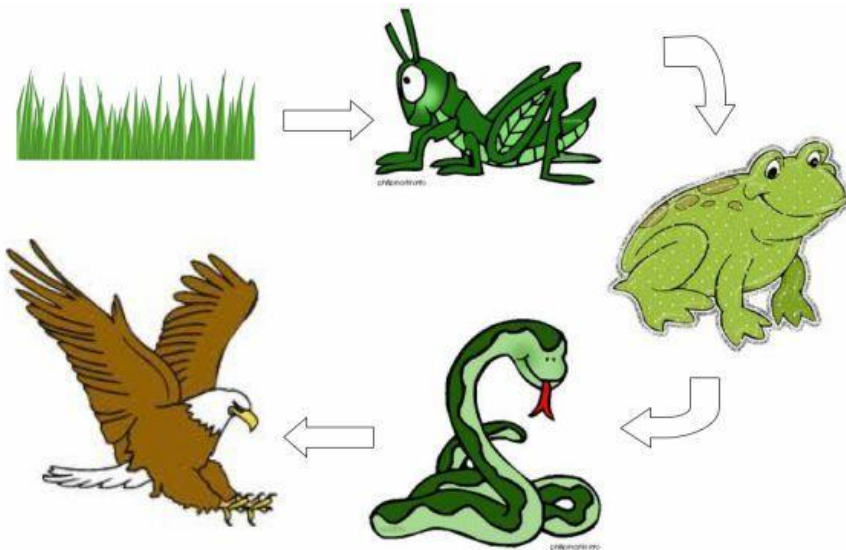
Reason(R): One end of current carrying straight solenoid behaves as north pole and the other end as a south pole just like a bar magnet.

- (a) Both (A) and (R) are true but (R) is the correct explanation of (A)
- (b) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (c) (A) is true but (R) is false.
- (d) (A) is false but (R) is true

Correct Answer: (a)

Feedback: On freely suspending a current carrying solenoid it comes to rest in geographical N-S direction, because current carrying solenoid behaves the same as a bar magnet.

Q6 Food chains are very important for survival of most species. When only one element is removed from the food chain, it can result in extinction of a species. In some cases the foundation of the food chain consist of primary producers or Autotrophs that use solar energy to create complex organic compound. Species at higher trophic levels consume producers or other lives that consume producers.



In the given food chain, suppose the amount of energy at fourth trophic level is 5KJ. What will be the energy available at the producer level

- (a) 5 KJ
- (b) 50 KJ
- (c) 500 KJ
- (d) 5000 KJ

Correct Answer: (d)

Feedback: According to ten percent law only ten percent of energy is transferred to next trophic level.

Energy available to snake – 5 KJ

Energy available to Frog – 50 KJ

Energy available to Grasshopper – 500 KJ

Energy available to Grass – 5000 KJ

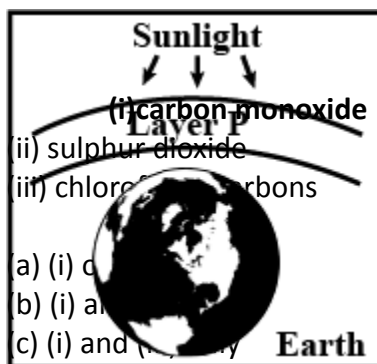
Q7 The decomposers are not included in the food chains because decomposers

- (a) Act at every trophic level of food chain
- (b) Do not break down organic compounds
- (c) Convert organic material into inorganic forms
- (d) Release enzymes outside their bodies to convert organic material to inorganic form

Correct Answer: (a)

Feedback : As the decomposers , decompose every organism at each trophic level , so it is impossible to place decomposers in food chain.

Q8 The layer P is present in the stratosphere region of atmosphere. which of these chemical causes the thinning of layer "P"?



- a) (i) and (ii)
- b) (i) and (iii)
- c) (i) and (iii)
- d) (i) (ii) and (iii)

Correct Answer : (c)

Feedback : Layer P is ozone layer . Carbon Monoxide and Chlorofluorocarbon cause the thinning of Ozone layer.

Q9 Effective segregation of waste at the point of generation is very important. Select the appropriate statements giving the importance of waste segregation.

- (i) Less waste goes to the landfill.

- (ii) Better for public health and environment
- (iii) Help in reducing the waste
- (iv) Resulting in deterioration of waste pickers health
- (a) Both (i) and (ii)
- (b) Both (i) and (iii)
- (c) Both (ii) and (iii)
- (d) Both (i) and (iv)

Correct Answer : (a)

Feedback : Effective Segregation of waste is based on the fact that less waste goes to the landfill which is better for public health and environment.

Q10 Recycling of paper is a good practice but recycled paper should not be used for food packaging because

- (a) Recycled paper takes lots of space
- (b) Recycled papers can't cover food properly
- (c) Recycled papers can cause infection due to release of methane
- (d) Recycled papers are costly

Correct Answer : (c)

Feedback : It is because decomposition of paper releases methane which may cause infection.