**Chapter 17**

**Electric Current and its Effects**

1. One day a boy was looking around his house, he observed a strange kind of switch was there before the air conditioner and when he asked his father what was that switch known as. His father told him it was MCB. Suggest why was THE MCB put there?
2. List down at least 4 electrical appliance used by us daily and state the energy change involved in those appliances.
3. Fill in the blanks
4. The heat produced by a wire depends on \_\_\_\_\_\_\_ of current that flows through the wire.
5. The heating element of electric kettle is usually made of \_\_\_\_\_\_\_\_\_\_\_.
6. When the metal filament of a bulb gets heated to very high temperature it becomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and start emitting light.
7. The ‘melt down action’ of a fuse depends upon its \_\_\_\_\_\_\_\_\_\_\_\_\_.
8. Magnetic effect of current is used to make \_\_\_\_\_\_\_\_\_ magnets known as electromagnets.
9. The \_\_\_\_\_\_\_\_\_\_\_\_ is a simple household device based on the magnetic effect of current.
10. As the \_\_\_\_\_\_\_\_\_\_ bends towards the electromagnet, the gong is struck.
11. The magnetic strength of an electromagnet can be increased by wrapping insulated coil around a soft \_\_\_\_\_\_\_\_\_\_.
12. It is possible to produce magnetism without using \_\_\_\_\_\_\_\_.
13. State whether given statements are true/false
14. MCB’s are more commonly used as safety devices in our household.
15. When bulb gets heated to white-hot it emits lot of heat energy.
16. There is always a maximum limit of the current that can safely flow through a given circuit.
17. The magnetic strength of an electromagnet can be increased by increasing the number of turns in the coil.
18. When the current flows through the electromagnet it does not acquire magnetism and attract the armature.
19. Multiple choice questions
20. When the coil becomes red-hot on heating it gives out \_\_\_\_\_\_\_\_\_\_ energy.
21. Heat b) Light c) Magnetic d) electric
22. On which factors does the heat produced in a given coil depends
23. Strength of current through the wire b) nature of the material and length and thickness of wire c) time for which electric current flows through d) all mentioned above.
24. Which of them is the disadvantage of the heating effect?
25. Coil becomes white hot and gives light b)Coil becomes red hot and gives heat energy used in heater c) breaks the insulation of wires and devices d) none of the above.
26. An electric fuse is a safety device used to
27. limit the current in a circuit b) allow any amount of current to flow through the circuit c) not to allow any current in the circuit
28. Define the following
29. Electric fuse
30. Miniature Circuit breaker
31. Magnetic effect of current
32. Short circuit
33. What is solenoid? What does it do?
34. Give reasons for the following
35. The electric bell goes on ringing continuously as long as the switch is kept pressed.
36. Electromagnets are temporary magnets.
37. Fuse wires of different kinds are used for different circuits and different appliances.
38. Nichrome is used for making wires of heating coils.
39. The metal filament of an electric bulb is made of tungsten wire.
40. Why do very often use an alloy of tin and lead for fuse wire?
41. Name the kind of effect of electric current is used in the following
42. Electric toaster
43. Bulb
44. Electric fuse
45. MCB’s
46. Electric bell
47. Mobile cranes
48. How can the magnetic strength of an electromagnet be increased?
49. Why do we prefer iron core for making electromagnets?
50. With help of diagram explain the working of an electric bell.
51. Write the full form of MCB. Why is it commonly as safety device in our households?
52. What should be current rating of an electric fuse?
53. What is an electric fuse? State its function.
54. What do you understand by the terms a) short circuit b) overload and c) Insulation break?
55. How is the break in the circuit created?
56. List the practical disadvantage of the heating effect of current.
57. What is meltdown of wire? When does it occur?
58. How is this property of melt down being practically used by us?
59. Complete the given table

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| S.N | Name of the device of the electric circuit | Symbol Used in the circuit |
| 1 | Battery |  |
| 2 | Plug key |  |
| 3 | Ammeter |  |
| 4 | Voltmeter |  |
| 5 | Resistance wire |  |