Chapter-4

Worksheet-2

Section 1

Q1. Explain construction of a simple electromagnet with a labelled diagram.

Q2. Why do birds do not get shock when they sit on high power live wire but we do?

Q3. Why are compact fluorescent lamps (CFLs) or LEDs preferred over electric bulbs?

Q4. Can we use same fuse in a geyser and a television set or any other electrical appliances? Explain.

Q5. How many types of circuit are there? Describe.

Q6. When does the current flow throughout the circuit? Explain.

Q7. Why are MCB preferred over electric fuses?

Q8. What is the cause of heating effect of electric current?

Q9. Give reason why :-
(a) MCB'S are used in place of fuses in homes & offices nowadays.
(b) We should not touch a lighted electric bulb connected to the mains.

Q10. List the factors affecting the amount of heat produced in an element.

Section 2

Q11. Marking on a bulb is 9 W, 220 V. What does it signify?

a) The bulb is connected across the 220 volts; 9 joules of energy is consumed for every second.

b) The bulb is connected across 220 volts; 9 joules of energy is released.
c) 9 unit of current will flow in the bulb.
d) 220 unit of current will flow in the bulb.

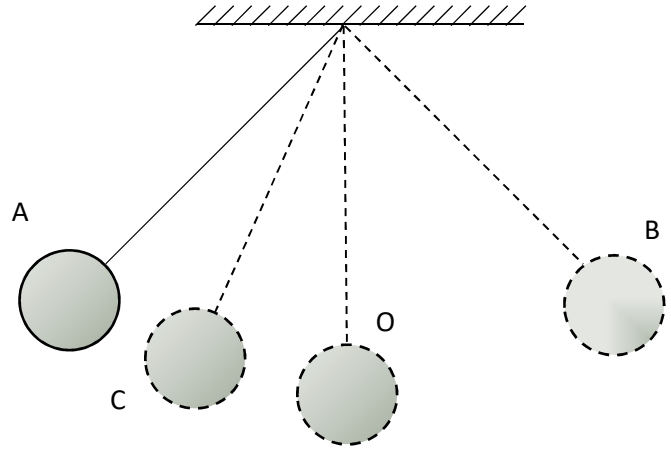
Q12. How will you convert the speed given in km/h to m/s?

a) By multiplying with 5/16
b) By multiplying with 6/5
c) By multiplying with 18/5
d) By multiplying with 5/18

Q13. Which one records the distance travelled by a vehicle?

a) Speedometer
b) Manometer
c) RPM meter
d) Odometer

Q14. Time taken by the bob to move from A to C is t_1 and from C to O is t_2. The time period of this simple pendulum is



a) $(t_1 + t_2)$
b) $2(t_1 + t_2)$
c) $3(t_1 + t_2)$
d) $4(t_1 + t_2)$

Q15. With what speed should a car travel so that it can cover a distance of 10 km in 10 min?

a) 1 kmph
b) 5 kmph
c) 12 kmph
d) 60 kmph

Q16. Which of the following is the most suitable device for measuring the time the runners take in a 100 m marathon?

a) Hourglass
b) Stopwatch
c) Pendulum
d) Sun dial

Q17. Which of the following is given incorrectly?

a) Speedometer: Speed
b) Odometer: Odour
c) Anemometer: Wind speed
d) Stopwatch: Time

Q18. A person is seated in a train under motion. With reference to which of the following surroundings is he at rest?

a) Person watching him from the front seat
b) Person watching him from the ground

c) Trees on the ground
d) A car moving in the opposite direction to the train

Q19. In a 100 m race Sana and Arundhati ran at an average speed of 6.5 ms^{-1} and 15.5 ms^{-1}

respectively. If 12 seconds is the time taken in school records for 100 metre race, then which of the following can be true?

a) Sana broke the record
b) Arundhati broke the record
c) Both Sana and Arundhati broke the record
d) Neither Sana nor Arundhati broke the record.

Q20. Melissa takes 20 minutes to reach his school with a speed of 4 ms−1.

How far is his school from home?

a) 3.6 km
b) 4.8 km
c) 4 km
d) 3.4 km