

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.

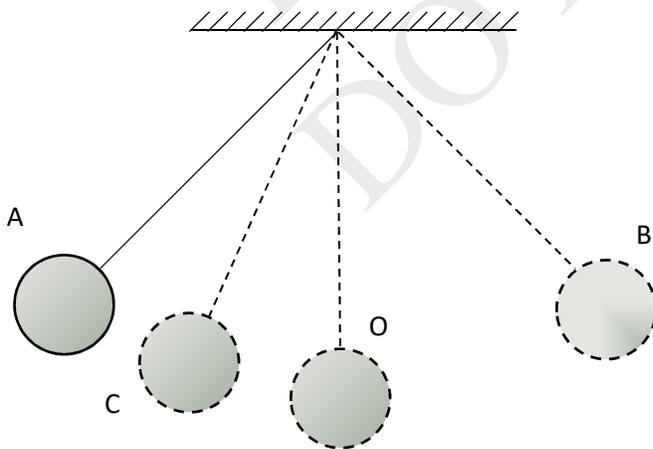
Q12. How will you convert the speed given in km/h to m/s?

- a) By multiplying with $\frac{5}{16}$
- b) By multiplying with $\frac{6}{5}$
- c) By multiplying with $\frac{18}{5}$
- d) By multiplying with $\frac{5}{18}$

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