



Subject - Science

Week – April II

Grade -10

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1st term -Revision exercises

1. What is meant by the force?

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2. What are the things a force can do?

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3. Write the Newton’s 1st law about the motion.

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4. If a bus which is at rest, starts to move without the knowledge of a passenger in it, that passenger would fall in the backward direction. Explain this incident using Newton’s laws.

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5. Write the Newton’s second law and state the equation using symbols.

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6. What is the standard unit of measuring force?

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7. Define the Newton.

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8. What is the force required to give an acceleration of 3ms^{-2} to a 4kg mass?

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9. Complete the following table.

| Force (N) | Mass (kg) | Acceleration (ms^{-2}) |
|-----------|-----------|-----------------------------------|
| | 500 g | 4ms^{-2} |
| 50 N | | 2.5ms^{-2} |
| 100 N | 20 kg | |
| | 60 kg | 6ms^{-2} |
| | 85 kg | 3.5ms^{-2} |
| 250 N | | 5ms^{-2} |
| 180 N | 9 kg | |

10. Write the Newton's 3rd law.

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11. Fill in the blanks.

..... is a measurement of how difficult it is to stop the motion of an object. It depends on two factors, which are and The unit of it is and it is a quantity.

12. Write an expression for the momentum.

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13. What is the momentum of a vehicle with a mass of 3000kg which is moving at a velocity of 30ms^{-1} .

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14. Explain the action and the reaction of following incidents.

- I. Swimming
- II. Rowing a boat
- III. A balloon which is moving upward.
- IV. A skyscraper which is moving upward.

15. Explain what is meant by weight of an object.

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16. The mass of a man is 80kg. Find his weight ($g=10\text{ms}^{-2}$)

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17. On the moon, the gravitational acceleration is about $1/6$ of that on the earth. Calculate the weight of the above man if he is on the moon.

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18. The weight of an object is 10N and its momentum is 12kgms^{-2} . Due to a force applied in the direction of motion, the velocity of the object increased to 18ms^{-1} during 4s. Find the force exerted on that object.

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