1. Force is a:
   a) Push or pull
   b) Only push
   c) Only pull
   d) Neither push nor pull

2. Which of these is a contact force?
   a) Magnetic force
   b) Gravitational force
   c) Muscular force
   d) Electrostatic force

3. Frictional force always:
   a) Helps objects move faster
   b) Opposes motion
   c) Attracts objects
   d) Changes shape of objects

4. Which force is responsible for attracting iron nails to a magnet?
   a) Friction
   b) Magnetic
   c) Electrostatic
   d) Gravitational

5. Gravity pulls objects:
   a) Upwards
   b) Sideways
   c) Towards the Earth
   d) Away from Earth

6. Electrostatic force acts between:
   a) Magnetic poles
   b) Electrically charged objects
   c) Planets
   d) Water molecules

7. Which of these does not require contact to act?
   a) Friction
   b) Magnetic force
   c) Muscular force
   d) All of the above

8. When equal forces act in opposite directions, they are called:
   a) Balanced forces
   b) Unbalanced forces
   c) Frictional forces
   d) Non-contact forces

9. Unbalanced forces cause:
   a) No movement

b) Change in motion
c) Shape change only
d) Reduced gravity

10. Which force allows us to walk without slipping?
a) Magnetic
b) Friction
c) Electrostatic
d) Gravitational

11. Which of these is not an effect of force?
a) Changing speed
b) Changing direction
c) Changing colour
d) Changing shape

12. Pressing clay changes its:
a) Speed
b) Direction
c) Shape
d) Position

13. Muscular force is used when:
a) Writing on paper
b) Lifting a box
c) Both a and b
d) None of these

14. The attraction between Earth and Moon is due to:
a) Magnetic force
b) Electrostatic force
c) Gravitational force
d) Friction

15. Which force helps stop moving vehicles?
a) Friction
b) Magnetic
c) Muscular
d) Electrostatic

16. Friction can cause:
a) Smooth movement always
b) Wear and tear
c) Reduced safety
d) Increased gravity

17. Which type of force acts without physical contact?
a) Muscular
b) Frictional
c) Magnetic
d) All of the above

18. Which force makes paper bits stick to a comb after rubbing?
a) Magnetic
b) Gravitational
c) Electrostatic
d) Friction

19. Force is required to:
a) Only move objects
b) Only stop objects
c) Move, stop, speed up, slow down, or change shape
d) None of these

20. Pulling a rope is an example of:
a) Push
b) Pull
c) Both push and pull
d) No force

Assertion–Reason Questions

(Options: A – Both A and R true, R explains A; B – Both A and R true, R not explanation; C – A true, R false; D – A false, R true)

21. A: Friction opposes motion between two surfaces.
R: Friction is a non-contact force.

22. A: Gravity acts on all objects with mass.
R: The more massive an object, the stronger its gravitational pull.

23. A: Magnetic force can repel and attract.
R: Like poles repel and unlike poles attract.

24. A: Balanced forces change the state of motion.
R: In balanced forces, the net force is zero.

25. A: Electrostatic force acts only when objects are in contact.
R: It can act without contact between charged objects.

Case Study-Based Questions

Case Study 1 – Stopping a Bicycle
A boy riding a bicycle applies brakes. The wheels slow down and stop.

a) Which force caused the bicycle to stop?

b) Is this force contact or non-contact?

c) Name one disadvantage of too much of this force.

d) Suggest one way to reduce this force in machines.

Case Study 2 – Magnet in a Workshop
A mechanic uses a magnet to pick up scattered iron nails from the floor.

a) Which type of force is being used?

b) Is it contact or non-contact?

c) Can this force act on plastic pieces? Why/Why not?

d) Give one other example where this force is useful.