YEAR 7 SCIENCE
PHYSICAL SCIENCES
TEST

NAME: SOLUTIONS **CLASS:** _____ **Mark:** ___/28

Change to an object's motion is caused by unbalanced forces acting on the object. Earth's gravity pulls objects towards the centre of the Earth.

Multiple Choice **Write the answer to each question in the appropriate box at right.**

1. _____ refers to when a force is equal and opposite to another force.

   (a) Balanced force
   (b) Unbalanced force
   (c) Magnitude
   (d) Friction

2. A force is measured in:

   (a) metres.
   (b) centimetres.
   (c) Newtons.
   (d) grams.

3. _____ is a force acting in the opposite direction to motion.

   (a) Direction
   (b) Unbalanced force
   (c) Gravity
   (d) Friction

4. _____ is a force that pulls things towards Earth.

   (a) Direction
   (b) Unbalanced force
   (c) Gravity
   (d) Friction

5. _____ refers to the way an object is travelling (left, right, up, down).

   (a) Direction
   (b) Balanced force
   (c) Gravity
   (d) Friction

6. The difference between two forces (measured in N) is:

   (a) gravity.
   (b) unbalanced force.
   (c) magnitude.
   (d) friction.

QUESTION	ANSWER
1	A
2	C
3	D
4	C
5	A
6	C
7	A
8	B
9	D
10	B

7. Forces acting on objects occur in pairs. This statement is:

(a) true.
(b) false.

8. When one force in a pair of forces is greater than the other, it is called:

(a) a balanced force.
(b) an unbalanced force.
(c) magnitude.
(d) friction.

9. If I am pushing a book towards you with a force of 10 N, and you are pushing the book back towards me with a force of 2 N, which way will the book move, and with what force?

(a) Towards me with 5 N of force.
(b) Towards you with 5 N of force.
(c) Towards me with 8 N of force.
(d) Towards you with 8 N of force.

10. A push or pull exerted on an object or substance is called:

(a) a force.
(b) motion.
(c) position.
(d) gravity.

Short Answer **Write the answer to the questions in the spaces provided.**

1. List the ***three*** commonly recognised ***non-contact forces***.

- Gravity
- Electrostatic
- Magnetic

(3)

2. Give ***three*** examples of forces ***other than non-contact forces***.

- Friction Twisting Exploding
- Pushing Stretching
- Pulling Colliding

(3)

[Any 3 - 1 mark each.]

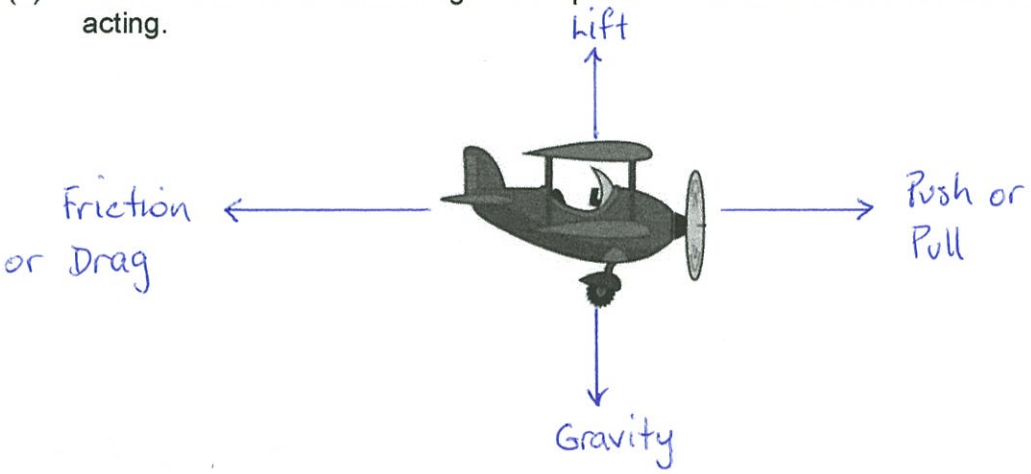
3. (a) How can we represent forces in diagrams?

Arrows. (1)

Length of arrow = size of force. (1)

(2)

(b) Demonstrate this on the image of the plane. Draw and name ***two forces*** that may be acting.



(2)

4. Complete the sentence.

A force is a push or a pull.

(2)

5. List ***four*** things that a force can do to an object.

- Speed it up.
- Slow it down.
- Change its direction.
- Changes its shape.

(4)

6. What is friction?

The force occurring when one surface moves over another surface

(1)

7. Give an example of a situation in which friction is useful.

- Brakes on a car or bicycle.
- Tread on tyres.
- Tread on shoes.
- Grip on cricket bat, tennis racquet, etc.
- Safety floor in Science laboratory - no slip.

(1)

[Any reasonable example - 1 mark.]