



PART A: TRUE or FALSE. Place a T or F in the space provided. (10 marks)

1. _____ It is easier for birds to overcome gravity due to the fact their bones are hollow.
2. _____ The rudder on a plane controls pitch.
3. _____ Drag is the most important force when an airplane is taking off.
4. _____ Gliders look for thermals (rising columns of warm air).
5. _____ Ailerons help a pilot control the roll of an aircraft to the left or right.
6. _____ A balanced force is needed for an aircraft to take off.
7. _____ A force is the ability to rise or float in a fluid.
8. _____ Lighter-than-air aircraft depend on wind for some thrust.
9. _____ Buoyancy can occur in water and in the air.
10. _____ Oxygen is not a fluid because it is a gas.

PART C: FILL IN THE BLANK. Using your knowledge of vocabulary from this unit, please fill in the blank with the most appropriate word(s). (10 marks)

1. The force which enables something to rise or float in a fluid is called _____.
2. The flap on the wings of an airplane are called _____.
3. _____ is the force exerted by a rocket or jet engine that moves something forward.
4. The side-to-side movement of the nose of a plane is called _____.
5. _____ is the up-and-down movement of the nose of a plane.

6. _____ states that the faster a fluid or gas travels, the lower its pressure.
7. The _____ is the body of an aircraft that holds passengers or cargo.
8. To _____ is to drive or push on object forward.

PART D: SHORT ANSWER. Answer each question using a couple of well worded sentences. (2 each x 10 = 20 marks)

1. Explain why a hot air balloon rises. How does it land?

2. What is an airfoil? Why is it so important for flight?

3. Identify and describe 3 properties of air.

4. Define fluid and give 2 examples.

5. List the four forces and tell how they act on an airplane.

6. What three parts of a plane control its movements? What does each control?

7. Give 2 examples of **living things** and how they have adapted to propel themselves through air or water.
