

1. Question: What is the principle that states "for every action, there is an equal and opposite reaction"?

Answer: Newton's Third Law of Motion

2. Question: Which law of thermodynamics states that energy cannot be created or destroyed, only transferred or transformed?

Answer: The First Law of Thermodynamics

3. Question: What term describes the force exerted by the air on a moving body in the opposite direction to its motion?

Answer: Drag

4. Question: What type of aircraft propulsion system accelerates a gas to produce thrust?

Answer: Jet Propulsion

5. Question: What is the measure of the mass per unit volume of a substance?

Answer: Density

6. Question: Which mathematical equation describes the relationship between pressure, volume, and temperature of a gas?

Answer: The Ideal Gas Law ($PV = nRT$)

7. Question: What is the term for the speed of an aircraft relative to the air mass in which it is flying?

Answer: Airspeed

8. Question: What term describes the force that opposes the weight of an aircraft during flight?

Answer: Lift

9. Question: What is the name of the imaginary line passing through the center of gravity of an aircraft, about which it rotates in flight?

Answer: The Aircraft's Axis

10. Question: What is the study of the motion of air and other gases, particularly as they relate to the interaction with solid objects, like aircraft?

Answer: Aerodynamics

11. Question: What fundamental principle of flight describes the upward force generated by the wing of an aircraft as it moves through the air?

Answer: Lift

12. Question: Which fundamental property of fluids describes the resistance of a fluid to flow?

Answer: Viscosity

13. Question: What term describes the force that causes an aircraft to change its direction of motion?

Answer: Thrust

14. Question: What is the name of the device used to measure the airspeed of an aircraft?

Answer: Airspeed Indicator

15. Question: What term describes the angle between the chord line of an airfoil and the direction of the relative wind?

Answer: Angle of Attack

16. Question: What fundamental law of motion states that an object will remain at rest or in uniform motion unless acted upon by an external force?

Answer: Newton's First Law of Motion

17. Question: What is the name of the force that acts perpendicular to the direction of motion of a fluid through a duct?

Answer: Normal Force

18. Question: What term describes the process by which an aircraft reduces its speed and altitude before landing?

Answer: Descent

19. Question: What fundamental law of motion states that force is equal to mass times acceleration?

Answer: Newton's Second Law of Motion

20. Question: What is the name of the imaginary line extending from the leading edge to the trailing edge of an airfoil?

Answer: Chord Line

21. Question: What term describes the force exerted by the air on an aircraft's wings, creating lift?

Answer: Aerodynamic Lift

22. Question: What is the name of the device that controls the attitude of an aircraft by changing the direction of airflow over the control surfaces? A
- Answer: Flight Control Surfaces (e.g., ailerons, elevators, rudder)
23. Question: What fundamental law of motion states that for every force applied to an object, there is an equal and opposite reaction force?
- Answer: Newton's Third Law of Motion
24. Question: What term describes the ratio of the aircraft's speed to the speed of sound in the surrounding air?
- Answer: Mach Number
25. Question: What is the name of the point through which the total weight of an object appears to act, regardless of its orientation?
- Answer: Center of Gravity
26. Question: What term describes the increase in pressure and decrease in velocity of a fluid that occurs as it flows through a constriction?
- Answer: Bernoulli's Principle
27. Question: What is the name of the device that measures the angle of an aircraft's wings relative to the horizon?
- Answer: Angle of Attack Indicator
28. Question: What fundamental law of thermodynamics states that heat always flows from hotter to colder substances?
- Answer: The Second Law of Thermodynamics
29. Question: What term describes the flow of air over the surface of an aircraft's wings, generating lift?
- Answer: Boundary Layer
30. Question: What is the name of the process by which an aircraft increases its altitude during flight?
- Answer: Climb
31. Question: What term describes the ratio of the aircraft's lift to its weight?
- Answer: Lift-to-Weight Ratio

32. Question: What is the name of the boundary that separates the region of subsonic flow from supersonic flow around an aircraft?

Answer: Sound Barrier

33. Question: What fundamental law of motion describes the relationship between an object's mass, acceleration, and the force applied to it?

Answer: Newton's Second Law of Motion

34. Question: What term describes the rotational motion of an aircraft around its longitudinal axis?

Answer: Roll

35. Question: What is the name of the component of an aircraft engine that compresses incoming air before it enters the combustion chamber?

Answer: Compressor

36. Question: What fundamental property of fluids describes the ability of a fluid to exert an upward force on an object immersed in it?

Answer: Buoyancy

37. Question: What term describes the ability of an aircraft to withstand the stresses encountered during flight without breaking apart?

Answer: Structural Integrity

38. Question: What is the name of the imaginary line extending from the nose to the tail of an aircraft, passing through its center of gravity?

Answer: Longitudinal Axis

39. Question: What term describes the movement of an aircraft around its vertical axis?

Answer: Yaw

40. Question: What is the name of the device used to measure the altitude of an aircraft above a reference point?

Answer: Altimeter

41. Question: What term describes the force experienced by an aircraft when its lift is less than its weight, causing it to descend?

Answer: Sink Rate

42. Question: What is the name of the component of an aircraft engine that mixes fuel with compressed air and ignites the mixture?

Answer: Combustor or Combustion Chamber

43. Question: What fundamental law of motion states that the rate of change of momentum of an object is directly proportional to the applied force? Answer: Newton's Second Law of Motion

44. Question: What term describes the ability of an aircraft to return to stable flight after being disturbed from its original attitude?

Answer: Stability

45. Question: What is the name of the device used to measure the speed of an aircraft relative to the ground?

Answer: Groundspeed Indicator

46. Question: What fundamental property of fluids describes the force per unit area exerted by a fluid on an object immersed in it?

Answer: Pressure

47. Question: What term describes the ratio of the aircraft's thrust to its weight?

Answer: Thrust-to-Weight Ratio

48. Question: What is the name of the imaginary line passing through the center of pressure of an aircraft's wings, about which it rotates in flight?

Answer: Aerodynamic Center

49. Question: What term describes the process of reducing the lift and increasing the weight of an aircraft to descend rapidly?

Answer: Dive

50. Question: What is the name of the device that measures the angle of descent or climb of an aircraft?

Answer: Vertical Speed Indicator

51. Question: What term describes the distance an aircraft travels horizontally for a given change in altitude?

Answer: Glide Ratio

52. Question: What is the name of the device that measures the rate of rotation of an aircraft around its longitudinal axis?

Answer: Turn Coordinator

53. Question: What fundamental law of motion describes the tendency of an object to remain at rest or in motion unless acted upon by an external force?

Answer: Newton's First Law of Motion

54. Question: What term describes the force that opposes the motion of an aircraft through the air?

Answer: Drag

55. Question: What is the name of the component of an aircraft engine that converts the energy released from fuel combustion into mechanical energy?

Answer: Turbine

56. Question: What fundamental property of fluids describes the force that opposes the relative motion of adjacent layers within a fluid?

Answer: Shear Stress

57. Question: What term describes the process of an aircraft maintaining a constant altitude while decreasing its speed?

Answer: Level Off

58. Question: What is the name of the device that measures the rate of climb or descent of an aircraft?

Answer: Vertical Speed Indicator

59. Question: What term describes the point at which the airflow over an airfoil separates, causing a loss of lift?

Answer: Stall

60. Question: What is the name of the device that measures the air pressure acting on an aircraft as it moves through the air?

Answer: Pitot Tube

61. Question: What term describes the ability of an aircraft to maintain its course without drifting off track?

Answer: Stability

62. Question: What is the name of the component of an aircraft engine that redirects exhaust gases to generate forward thrust?

Answer: Nozzle

63. Question: What fundamental property of fluids describes the tendency of a fluid to resist flowing?

Answer: Viscosity

64. Question: What term describes the angle between the relative wind and the chord line of an airfoil? Answer: Angle of Attack

65. Question: What is the name of the imaginary line extending from wingtip to wingtip through the center of an aircraft?

Answer: Wingspan

66. Question: What term describes the point in an aircraft's flight envelope where it experiences maximum aerodynamic stress?

Answer: Critical Mach Number

67. Question: What is the name of the component of an aircraft engine that compresses incoming air before mixing it with fuel?

Answer: Compressor

68. Question: What fundamental principle of flight states that the sum of the forces acting on an aircraft in flight is zero? Answer: Newton's Second Law of Motion

69. Question: What term describes the distance an aircraft needs to come to a complete stop from its current speed?

Answer: Stopping Distance

70. Question: What is the name of the component of an aircraft engine that converts rotational motion into thrust?

Answer: Propeller

71. Question: What term describes the increase in pressure and decrease in velocity of a fluid as it passes through a nozzle?

Answer: Bernoulli's Principle

72. Question: What is the name of the device that measures the angle of an aircraft's wings relative to the horizon?

Answer: Attitude Indicator

73. Question: What fundamental property of fluids describes the force exerted by a fluid perpendicular to the surface of an object immersed in it?

Answer: Buoyancy

74. Question: What term describes the rotational motion of an aircraft around its lateral axis?

Answer: Pitch

75. Question: What is the name of the imaginary line extending from the nose to the tail of an aircraft, passing through its center of gravity?

Answer: Longitudinal Axis

76. Question: What term describes the force that opposes the motion of an aircraft through the air? Answer: Drag

77. Question: What is the name of the component of an aircraft engine that compresses incoming air before mixing it with fuel?

Answer: Compressor

78. Question: What fundamental law of motion states that for every force applied to an object, there is an equal and opposite reaction force?

Answer: Newton's Third Law of Motion

79. Question: What term describes the distance an aircraft travels horizontally for a given change in altitude?

Answer: Glide Ratio

80. Question: What is the name of the device that measures the airspeed of an aircraft? Answer: Airspeed Indicator

81. Question: What term describes the force that causes an aircraft to change its direction of motion?

Answer: Thrust

82. Question: What is the name of the device used to measure the altitude of an aircraft above sea level?

Answer: Altimeter

83. Question: What fundamental law of motion states that an object will remain at rest or in uniform motion unless acted upon by an external force?

Answer: Newton's First Law of Motion

84. Question: What term describes the ratio of the lift generated by an aircraft's wings to the drag experienced by the aircraft?

Answer: Lift-to-Drag Ratio

85. Question: What is the name of the device that measures the rate of rotation of an aircraft around its vertical axis?

Answer: Turn Coordinator

86. Question: What fundamental property of fluids describes the resistance of a fluid to flow?

Answer: Viscosity

87. Question: What term describes the imaginary line passing through the center of gravity of an aircraft, about which it rotates in flight?

Answer: Moment Arm

88. Question: What is the name of the component of an aircraft engine that mixes fuel with air before combustion?

Answer: Carburetor

89. Question: What fundamental law of thermodynamics states that energy cannot be created or destroyed, only transformed from one form to another?

Answer: The First Law of Thermodynamics

90. Question: What term describes the angle between the chord line of an airfoil and the direction of the relative wind?

Answer: Angle of Attack

91. Question: What term describes the distance between the leading and trailing edges of an airfoil?

Answer: Chord Length

92. Question: What is the name of the component of an aircraft engine that converts the energy of expanding gases into mechanical energy to drive the compressor?

Answer: Turbine

93. Question: What fundamental law of motion states that force is equal to the rate of change of momentum?

Answer: Newton's Second Law of Motion

94. Question: What term describes the angle between the longitudinal axis of an aircraft and the horizon?

Answer: Pitch Angle

95. Question: What is the name of the imaginary line passing through the center of pressure of an airfoil, about which it rotates in flight?

Answer: Aerodynamic Center

96. Question: What term describes the forward motion of an aircraft caused by the force of its engines?

Answer: Propulsion

97. Question: What is the name of the device used to measure the speed of an aircraft relative to the air mass in which it is flying?

Answer: Airspeed Indicator

98. Question: What fundamental property of fluids describes the flow pattern around objects moving through the fluid?

Answer: Fluid Dynamics

99. Question: What term describes the rate at which work is done or energy is transferred?

Answer: Power

100. Question: What is the name of the imaginary line passing through the center of pressure of an aircraft's wings, about which it rotates in flight?

Answer: Wing Axis