Stage 1 Quiz

Name:______________________________________________

1- The four forces acting on an airplane in flight are
A- lift, weight, thrust, and drag.
B- lift, weight, gravity, and thrust.
C- lift, gravity, power, and friction.

2- (Refer to Figure 51.) The segmented circle indicates that the airport traffic is
A- left-hand for Runway 36 and right-hand for Runway 18.
B- left-hand for Runway 18 and right-hand for Runway 36.
C- right-hand for Runway 9 and left-hand for Runway 27.

3- Filling the fuel tanks after the last flight of the day is considered a good operating
procedure because this will
A- force any existing water to the top of the tank away from the fuel lines to the
engine.
B- prevent expansion of the fuel by eliminating airspace in the tanks.
C- prevent moisture condensation by eliminating airspace in the tanks.

4- While operating in Class D airspace, each pilot of an aircraft approaching to land
on a runway served by a visual approach slope indicator (VASI) shall
A- maintain a 3° glide until approximately 1/2 mile to the runway before going below
the VASI.
B- maintain an altitude at or above the glide slope until a lower altitude is necessary
for a safe landing.
C- stay high until the runway can be reached in a power-off landing.

5- What is the purpose of the runway/runway hold position sign?
A- Denotes entrance to runway from a taxiway.
B- Denotes area protected for an aircraft approaching or departing a runway.
C- Denotes intersecting runways.

6- An airplane has been loaded in such a manner that the CG is located aft of the aft
CG limit. One undesirable flight characteristic a pilot might experience with this
airplane would be
A- a longer takeoff run.
B- difficulty in recovering from a stalled condition.
C- stalling at higher-than-normal airspeed.

7- For internal cooling, reciprocating aircraft engines are especially dependent on
A- a properly functioning thermostat.
B- air flowing over the exhaust manifold.
C- the circulation of lubricating oil.
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8- (Refer to Figure 2.) If an airplane weighs 4,500 pounds, what approximate weight would the airplane structure be required to support during a 45° banked turn while maintaining altitude?
A- 4,500 pounds.
B- 6,750 pounds.
C- 7,200 pounds.

9- Pilots are encouraged to turn on their landing lights when operating below 10,000 feet, day or night, and when operating within
A- Class B airspace.
B- 10 miles of any airport.
C- 5 miles of a controlled airport.

10- On aircraft equipped with fuel pumps, when is the auxiliary electric driven pump used?
A- All the time to aid the engine-driven fuel pump.
B- In the event engine-driven fuel pump fails.
C- Constantly except in starting the engine.

11- After takeoff, which airspeed would the pilot use to gain the most altitude in a given period of time?
A- V(Y).
B- V(X).
C- V(A).

12- Wingtip vortices are created only when an aircraft is
A- operating at high airspeeds.
B- heavily loaded.
C- developing lift.

13- When departing behind a heavy aircraft, the pilot should avoid wake turbulence by maneuvering the aircraft
A- below and downwind from the heavy aircraft.
B- above and upwind from the heavy aircraft.
C- below and upwind from the heavy aircraft.

14- An airplane said to be inherently stable will
A- be difficult to stall.
B- require less effort to control.
C- not spin.
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15- What is an advantage of a constant-speed propeller?
A- Permits the pilot to select and maintain a desired cruising speed.
B- Permits the pilot to select the blade angle for the most efficient performance.
C- Provides a smoother operation with stable RPM and eliminates vibrations.

16- If an emergency situation requires a downwind landing, pilots should expect a faster
A- airspeed at touchdown, a longer ground roll, and better control throughout the landing roll.
B- groundspeed at touchdown, a longer ground roll, and the likelihood of overshooting the desired touchdown point.
C- groundspeed at touchdown, a shorter ground roll, and the likelihood of undershooting the desired touchdown point.

17- (Refer to figure 67.) While practicing S-turns, a consistently smaller half-circle is made on one side of the road than on the other, and this turn is not completed before crossing the road or reference line. This would most likely occur in turn
A- 1-2-3 because the bank is decreased too rapidly during the latter part of the turn.
B- 4-5-6 because the bank is increased too rapidly during the early part of the turn.
C- 4-5-6 because the bank is increased too slowly during the latter part of the turn.

18- Which V-speed represents maximum landing gear extended speed?
A- V(LE).
B- V(LO).
C- V(FE).

19- Which instrument(s) will become inoperative if the static vents become clogged?
A- Airspeed only.
B- Altimeter only.
C- Airspeed, altimeter, and vertical speed.

20- (Refer to Figure 4.) What is the maximum flaps-extended speed?
A- 65 MPH.
B- 100 MPH.
C- 165 MPH.

21- (Refer to Figure 3.) Altimeter 2 indicates
A- 1,500 feet.
B- 4,500 feet.
C- 14,500 feet.
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22- The operating principle of float-type carburetors is based on the
A- automatic metering of air at the venturi as the aircraft gains altitude.
B- difference in air pressure at the venturi throat and the air inlet.
C- increase in air velocity in the throat of a venturi causing an increase in air pressure.

23- Should it become necessary to handprop an airplane engine, it is extremely important that a competent pilot
A- call 'contact' before touching the propeller.
B- be at the controls in the cockpit.
C- be in the cockpit and call out all commands.

24- During an approach to a stall, an increased load factor will cause the airplane to
A- stall at a higher airspeed.
B- have a tendency to spin.
C- be more difficult to control.

25- What change occurs in the fuel/air mixture when carburetor heat is applied?
A- A decrease in RPM results from the lean mixture.
B- The fuel/air mixture becomes richer.
C- The fuel/air mixture becomes leaner.

26- Which would most likely cause the cylinder head temperature and engine oil temperature gauges to exceed their normal operating ranges?
A- Using fuel that has a lower-than-specified fuel rating.
B- Using fuel that has a higher-than-specified fuel rating.
C- Operating with higher-than-normal oil pressure.

27- (Refer to Figure 49.) What is the difference between area A and area E on the airport depicted?
A- 'A' may be used for taxi and takeoff; 'E' may be used only as an overrun.
B- 'A' may be used for all operations except heavy aircraft landings; 'E' may be used only as an overrun.
C- 'A' may be used only for taxiing; 'E' may be used for all operations except landings.

28- (Refer to Figure 1.) The acute angle A is the angle of
A- incidence.
B- attack.
C- dihedral.
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29- During flight, when are the indications of a magnetic compass accurate?
A- Only in straight-and-level unaccelerated flight.
B- As long as the airspeed is constant.
C- During turns if the bank does not exceed 18°.

30- Excessively high engine temperatures, either in the air or on the ground, will
A- increase fuel consumption and may increase power due to the increased heat.
B- result in damage to heat-conducting hoses and warping of cylinder cooling fans.
C- cause loss of power, excessive oil consumption, and possible permanent internal engine damage.

31- The term 'angle of attack' is defined as the angle
A- between the wing chord line and the relative wind.
B- between the airplane's climb angle and the horizon.
C- formed by the longitudinal axis of the airplane and the chord line of the wing.

32- When are the four forces that act on an airplane in equilibrium?
A- During unaccelerated flight.
B- When the aircraft is accelerating.
C- When the aircraft is at rest on the ground.

33- The angular difference between true north and magnetic north is
A- magnetic deviation.
B- magnetic variation.
C- compass acceleration error.

34- (Refer to Figure 49.) According to the airport diagram, which statement is true?
A- Runway 30 is equipped at position E with emergency arresting gear to provide a means of stopping military aircraft.
B- Takeoffs may be started at position A on Runway 12, and the landing portion of this runway begins at position B.
C- The takeoff and landing portion of Runway 12 begins at position B.

35- If a flight is made from an area of high pressure into an area of lower pressure without the altimeter setting being adjusted, the altimeter will indicate
A- lower than the actual altitude above sea level.
B- higher than the actual altitude above sea level.
C- the actual altitude above sea level.

36- Which V-speed represents maneuvering speed?
A- V(A).
B- V(LO).
C- V(NE).
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37- What does the red line on an airspeed indicator represent?
A- Maneuvering speed.
B- Turbulent or rough-air speed.
C- Never-exceed speed.

38- In the Northern Hemisphere, a magnetic compass will normally indicate initially a turn toward the east if
A- an aircraft is decelerated while on a south heading.
B- an aircraft is accelerated while on a north heading.
C- a left turn is entered from a north heading.

39- What should be the indication on the magnetic compass as you roll into a standard rate turn to the right from a south heading in the Northern Hemisphere?
A- The compass will initially indicate a turn to the left.
B- The compass will indicate a turn to the right, but at a faster rate than is actually occurring.
C- The compass will remain on south for a short time, then gradually catch up to the magnetic heading of the airplane.

40- In what flight condition is torque effect the greatest in a single-engine airplane?
A- Low airspeed, high power, high angle of attack.
B- Low airspeed, low power, low angle of attack.
C- High airspeed, high power, high angle of attack.

41- Detonation occurs in a reciprocating aircraft engine when
A- the spark plugs are fouled or shorted out or the wiring is defective.
B- hot spots in the combustion chamber ignite the fuel/air mixture in advance of normal ignition.
C- the unburned charge in the cylinders explodes instead of burning normally.

42- An electrical system failure (battery and alternator) occurs during flight. In this situation, you would
A- experience avionics equipment failure.
B- probably experience failure of the engine ignition system, fuel gauges, aircraft lighting system, and avionics equipment.
C- probably experience engine failure due to the loss of the engine-driven fuel pump and also experience failure of the radio equipment, lights, and all instruments that require alternating current.
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43- (Refer to figure 63.) In flying the rectangular course, when would the aircraft be turned less than 90°?
A- Corners 1 and 4.
B- Corners 1 and 2.
C- Corners 2 and 4.