1. What is the atmospheric pressure and temperature at sea level in a standard atmosphere?

2. Pitot pressure is used by which flight instruments?

3. Referring to the airspeed indictor below, identify the V-speeds associated with the color arcs.

4. Which important airspeed limitation changes with aircraft weight and is not depicted on the airspeed indicator?

5. Match the following types of altitude with the corresponding description.

Pressure altitude

Density altitude

True altitude

Absolute altitude

- The height of the airplane above the earth's surface.
- The actual height of an object above mean sea level.
- The vertical distance above the standard datum plane
- Pressure altitude corrected for non-standard temperature.

6. You fly from an area of high pressure to an area of low pressure but do not reset your altimeter. If you maintain a consistent indicated altitude, will you be at your desired altitude ? Why?

7. What will the effect be on the airspeed indicator if the static system becomes clogged, but the pilot system remains unobstructed? Why?

8. What type of movement is shown by the altitude indicator, but not by the turn coordinator?

9. True/False. If you accelerate an airplane in the northern hemisphere on a heading of east, you compass will indicate a turn to the south.

10. Describe the function of the AHRS

11. Select the true statement regarding the digital attitude indicator.

The roll scale reference marks are at 10, 25, 45 and 60 degrees.

The turn rate vector located on the roll scale indicates standard-rate turns.

In a slip, the trapezoid of the slip/skid indicator located beneath the roll pointer moves to the inside of the turn.

12. What information by the trend vector on the HIS?

13. If the AHRS detects a problem with the integrity of the sensor information, what occurs?

The system reverts to reversionary mode and PFD information is displayed on the MFD.

A red X is placed over the display of the affected instrument (attitude indicator or HIS).

After an alert message appears, you must determine the affected instrument by comparing the indications of all instruments.

14. Select the true statement about the ADC.

The pitot tube, static source, and outside air temperature probe provide information to the ADC.

The ADC determines the readings for the airspeed indicator, attitude indicator, and altimeter.

The failure of a single sensor affects every instrument that receives information form the ADC.

15. What is true about the indications on the altimeter?

In six seconds, the airplane will reach an altitude of 8500 feet MSL, if it continues to climb at the same rate.

In ten seconds, the airplane will reach an altitude of 8460 feet MSL, if it continues to climb at the same rate.

In six seconds, the airplane will reach an altitude of 8460 feet MSL, if it continues to climb at the same rate.

16. Describe how the electronic flight display system compensates for a PFD screen failure.

17. True/False. An enhanced flight vision system (EFVS) can be displayed on a PFD.

End of Section C

1. Identify the four-stroke operating cycle step down in each of the following illustrations.
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2. As an airplane climbs, do you enrich or lean the mixture to maintain an optimum fuel/air ratio?

3. What is you first indication of carbonator ice in an airplane equipped with a fixed-pitch propeller?

4. Explain why an engine equipped with a fuel injection system is less susceptible to induction icing than one equipped with a float-type carburetor.

5. What is a magneto?

6. The uncontrolled, explosive ignition of the fuel/air mixture within the cylinder's combustion chamber describes which type of abnormal combustion? What actions can you take while airborne to help correct for this problem?

7. Select the true statement regarding fuel systems.

High – and low wing airplanes with a carburetor typically have gravity- feed systems.

An electrical fuel pump provides fuel under pressure to the fuel control unit after engine start.

A fuel system is used in airplanes with fuel injection systems to provide sufficient pressure to the injector nozzles.

8. True/False. If the fuel grade specified for your airplane is not available, you can use a higher grade of fuel.

9. Describe at least two functions performed by the engine oil system.

10. If a constant-speed propeller is set to a high RPM, will the blade pitch (angle) be high or low?

11. True/False. To prevent internal engine damage in an airplane equipped with a constant-speed propeller, you should avoid low RPM settings, with a high manifold pressure setting.

12. Immediately after engine start you notice that the ammeter shows a discharge. Is this normal? Why or Why not?

End of section B