



Private Pilot Worksheet

Introduction:

All of the questions in this worksheet is designed for you, the student, to gain knowledge of the required material for your pre-solo written test and private pilot oral exam. The knowledge areas are extensive and comprehensive in nature to not only teach you what is required, but to give you a more well-rounded ground knowledge to be better pilots. This worksheet is also designed in a way where you are given references for you to look through and be exposed to the FAR/AIM, PHAK, AFH, and POHs of your training aircraft; few of the questions have references different from those prescribed below. If you have any questions along the way, don't hesitate to ask your instructor!

Pre-solo related questions will be marked “[Pre-solo]”. Pre-solo students are encouraged to work through all of the worksheet before their pre-solo evaluation, but required to know the marked questions.

References:

Federal Aviation Regulations / Airmen's Information Manual (FAR/AIM)

Pilots Handbook of Aeronautical Knowledge (PHAK)
FAA-H-8083-25B

Airplane Flying Handbook (AFH)
FAA-H-8083-3B

Pilot's Operation Handbook (POH) – This needs to be for the specific make & model of your training aircraft. e.g. C172N, PA-28-161, etc.

Aircraft Specific Checklists (Checklists) – These can be found on the unitedflight.com website and are specific to your training aircraft.

Student's Name:

Student's Instructor:

Training Aircraft:

Certificates, Documents, & General Regulations

- 1) What documents must you have on you as a student pilot? What about as a Private Pilot? (*FAR 61.3*) **[Pre-solo]**

- 2) What are your limitations as a student pilot? What about as a Private Pilot? (*FAR 61.89, 61.113*) **[Pre-solo]**

- 3) Does your student pilot certificate ever expire? (*FAR 61.19*)

- 4) Can a student pilot fly at night? (*FAR 61.89*) **[Pre-solo]**

- 5) Can a student pilot fly into the Houston Class B Airspace? If so, what requirements must be met by the student? (*FAR 61.95*) **[Pre-solo]**

- 6) How far from KDWH can you fly as a student pilot without a cross-country endorsement? (*FAR 61.93*) **[Pre-solo]**

- 7) How long are the different medical certificates valid for? What is the minimum medical certificate you need as a student pilot? (*FAR 61.23*)

- 8) Who has final authority and responsibility for the operation of the aircraft when you are flying solo? (*FAR 91.3*) **[Pre-solo]**

- 9) When are safety belts and shoulder harnesses required to be worn? (*FAR 91.107*)

10) What does the FAA say about Alcohol & Drugs? (*FAR 91.17*) **[Pre-solo]**

11) What document must be in the aircraft before each flight? **A.R.R.O.W.** (*FAR 91.9, FAR 91.203*) **[Pre-solo]**

A

R

R

O

W

12) When does an aircraft registration certificate expire? (*PHAK 8-6*)

13) With respect to certification, privileges, and limitations of airmen, what does category, class, & type mean? (*FAR 61.5*)

Category:

Class:

Type:

14) If a pilot changes his/her permanent mailing address, how long can the pilot exercise the privileges of their pilot certificate without notifying the FAA? (*FAR 61.60*)

Airworthiness Considerations

1) Does an aircraft's airworthiness certificate ever expire? (*FAR 21.181*)

2) Does the POH meet the requirements of having an AFM? (*PHAK 9-1*)

- 3) Who says we have to follow and abide by the POH? *(FAR 91.9)*

- 4) Who is responsible for ensuring an aircraft is maintained in an airworthy condition?
(FAR 91.403) **[Pre-solo]**

- 5) What are the required aircraft inspections? **A.V.1.A.T.E.S.** *(PHAK 9-8)* **[Pre-solo]**
(FAR 91.409) **A -**
(FAR 91.171) **V -**
(FAR 91.409) **1 -**
(FAR 91.411) **A -**
(FAR 91.413) **T -**
(FAR 91.207) **E -**
S -

- 6) What is an Airworthiness Directive (AD)? Is it mandatory? *(PHAK 9-12)* **[Pre-solo]**

- 7) What different kinds of AD's are there? *(PHAK 9-12)*

- 8) Can you over-fly an annual inspection? *(FAR 91.409, PHAK 9-8)*

- 9) What is a Special Flight Permit? *(PHAK 9-12)*

- 10) Do you need to have an Emergency Locator Transmitter (ELT) in the airplane? *(FAR 91.207)*

11)When does an ELT battery have to be replaced or recharged? (*FAR 91.207*)

12)What required equipment must be in the aircraft & operational for you to fly Day VFR? (*FAR 91.205*) **A. T.O.M.A.T.O. F.L.A.M.E.S. [Pre-solo]**

A -	F -
T -	L -
O -	A -
M -	M -
A -	E -
T -	S -
O -	

13)What required equipment must be in the aircraft & operational for you to fly Night VFR? **F.L.A.P.S. (FAR 91.205) [Pre-solo]**

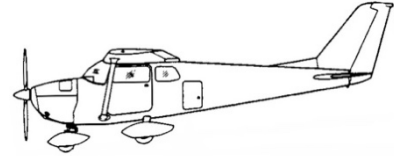
F -
L -
A -
P -
S -

14)While you were performing your pre-flight inspection, you notice the landing light inoperative. Can you fly our aircraft Day VFR? How about Night VFR? (*FAR 91.205, FAR 91.213*) **[Pre-solo]**

15)Can you fly an airplane with known inoperative equipment? (*FAR 91.213*)

Aerodynamics

- 1) What are the four forces of flight? Draw the forces acting on the aircraft. (PHAK 3-2, PHAK 5-2)



- 2) How is lift created? (PHAK 4-5)

Newton's 3rd Law:

Bernoulli's Principle:

- 3) Explain the different types of drag. (PHAK 5-6)

Parasite:

Induced:

- 4) What is the airspeed where Induced and Parasite drag meet? If we have an engine failure, why do you think we should fly at this speed? (PHAK 5-5)

- 5) What are the primary flight controls for your training aircraft? (PHAK 6-2) **[Pre-solo]**

- 6) What type of ailerons do we have on your training aircraft? (PHAK 6-3)

- 7) Do you have an elevator or a stabilator on your training aircraft? (PHAK 6-5)

- 8) What are the secondary flight controls for your training aircraft? *(PHAK 6-8)*

- 9) What type of trim tab does your training aircraft have? *(PHAK 6-10)*

- 10) Draw an airfoil and label the various components. *(PHAK 4-6)*

- 11) What is the mean camber line of the wing? Can we change it, if so, how do we change it? *(PHAK 4-6, PHAK 6-8)*

- 12) What are the different type of flaps? What type of flaps do we have on our training aircraft? *(PHAK 6-8)*

- 13) What is angle of attack (AOA)? How can we change it? *(PHAK 5-2, PHAK 4-8)*

- 14) What causes a wing to stall? *(PHAK 5-25)* **[Pre-solo]**

- 15) What causes an airplane to enter a spin? *(PHAK 5-36)* **[Pre-solo]**

- 16) When practicing stalls, we know we must keep the airplane coordinated in order to avoid a spin. What are the procedures for recovering from a spin? **P.A.R.E.** or **P.R.A.Y.** *(AFH 4-15)* **[Pre-solo]**

17) Stall speed increases with bank angle. Unless there is an obstacle, terrain or another aircraft, to avoid encountering a stall in the traffic pattern, pilots should avoid banking more than what bank angle? (AFH 8-3) **[Pre-solo]**

18) What are the factors that contribute to left turn tendencies of our aircraft? **T.G.A.S.**
(PHAK 5-30)

T -

G -

A -

S -

19) When do we experience left turn tendencies the most? (PHAK 5-30)

Performance & Limitations

1) What is the standard atmosphere at sea level? (PHAK 4-3)

2) What is Pressure Altitude? How can we calculate it? (PHAK 4-4, PHAK 11-3)

3) What is Density Altitude and why is it important to us? (PHAK 4-4, PHAK 11-3) **[Pre-solo]**

4) What factors affect air density? (PHAK 4-4, PHAK 11-3)

5) What does it mean when we say "High Density Altitude?" What about "Low Density Altitude?" (PHAK 4-4, PHAK 11-3)

- 6) What is maximum ramp weight and maximum takeoff weight? Why are they different? (PHAK 10-5, POH)
- 7) What is center of gravity? What happens to performance & aircraft stability when it moves forward/aft? (PHAK 5-40)

8) Define the following types of airspeeds. (PHAK 8-8, PHAK 11-18)

Indicated Airspeed (IAS):

Calibrated Airspeed (CAS):

True Airspeed (TAS):

Groundspeed (GS):

9) Define the following types of altitude. (PHAK 8-6, PHAK 11-3)

Indicated:

True Altitude:

Absolute Altitude:

10) Complete the following V speed information for your training aircraft. (PHAK 11-18, POH) **[Pre-solo]**

	Definition	ASI Markings / Color Range
V _R	_____	_____
V _G	_____	_____
V _{SO}	_____	_____
V _S	_____	_____
V _X	_____	_____
V _Y	_____	_____
V _{FE}	_____	_____
V _A	_____	_____
V _{NO}	_____	_____
V _{NE}	_____	_____

11) What are the V speeds (in knots) for your training aircraft at maximum gross weight? (PHAK 11-18, POH) **[Pre-solo]**

V_R _____
 V_G _____
 V_{SO} _____
 V_S _____
 V_X _____
 V_Y _____
 V_{FE} _____
 V_A _____
 V_{NO} _____
 V_{NE} _____

12) Does V_G change with weight and/or flap setting? Why? (PHAK ???)

13) When would we want to climb at V_X ? How about climbing at V_Y ? (PHAK 11-6)

14) Calculate your training aircraft's takeoff & landing distances as well as their respective ground roll for a normal takeoff effort and 50' obstacle takeoff effort at sea level on a standard atmospheric day. (POH) **[Pre-solo]**

15) How does temperature affect our takeoff performance? What about weight, headwind, and tailwind? (POH)

16) What is the maximum allowable flap setting for takeoff in your training aircraft? (POH) **[Pre-solo]**

17) What is the maximum demonstrated cross-wind component of your training aircraft? (POH, PHAK 11-26, AIM 4-3-3) **[Pre-solo]**

18) What is your glide range from 3,000' AGL with zero winds? (POH) **[Pre-solo]**

19) What is service ceiling? What is the service ceiling of your training aircraft? (AFH 3-17) **[Pre-solo]**

20) How much does one gallon of 100LL (type of fuel we use) weigh? (PHAK 10-5) **[Pre-solo]**

21) What are the following performance limitations of your training aircraft? (POH) **[Pre-solo]**

Max HP:	_____	MGTOW (Normal Cat.):	_____
Usable Fuel (gal):	_____	Useful Load (lbs):	_____
Max Oil (qts):	_____	Fuel Burn (GPH):	_____
Min Oil (qts):	_____		

Operation of Systems

- 1) Describe the pitot-static system. (PHAK 8-2) **[Pre-solo]**

- 2) How does the pitot-static system respond to blockages? (PHAK 8-10)

- 3) Does your altimeter read higher than your true altitude or lower than your true altitude when you fly into a colder air mass (your altimeter setting is constant)? (PHAK 8-4)

- 4) Describe the gyroscopic system & its instruments. (PHAK 8-15) **[Pre-solo]**

- 5) What are the two gyroscopic principles that the gyroscopic instruments rely on? (PHAK 8-15)

- 6) How are the gyroscopic instruments powered? (PHAK 8-16)

- 7) How does the vacuum system operate? *(PHAK 8-17, POH)*
- 8) Explain the magnetic compass. *(PHAK 8-23)*
- 9) What are the errors associated with the magnetic compass? *(PHAK 8-24)*
- 10) What are the four strokes or cycles of an engine? *(PHAK 7-4)*
- 11) Describe the engine of your training aircraft. **L.H.A.N.D.** *(POH)* **[Pre-solo]**
- L -**
- H -**
- A -**
- N -**
- D -**
- 12) What type of propeller is installed on your training aircraft? *(PHAK 7-4, POH)*
- 13) What does 'normally aspirated' mean? *(PHAK 7-12)*
- 14) What is used to cool the engine of your training aircraft? *(PHAK 7-2)*
- 15) What is the purpose of the engine oil? *(PHAK 7-16)*

- 16) What type of oil do we use in your training aircraft? *(POH)*
- 17) What are magnetos and what do they do? How many magnetos do we have and why? *(PHAK 7-15, POH)* **[Pre-solo]**
- 18) During run up, the pilot encounters engine roughness with an RPM drop greater than 125 RPM. What two things could be causing this problem? *(PHAK 7-15)* **[Pre-solo]**
- 19) What is the spark plug cleaning procedure? *(PHAK 7-15, POH, Checklists)* **[Pre-solo]**
- 20) What does the mixture control do? *(PHAK 7-9)*
- 21) What is the carburetor system? Does your training aircraft have one? *(PHAK 7-8, POH)*
- 22) What is carburetor heat? When do we use it? What are the indicators of carburetor icing? Why don't fuel injected engines have carburetor heat? *(PHAK 7-8)* **[Pre-solo]**
- 23) Describe the fuel system installed in your training aircraft. *(POH)* **[Pre-solo]**
- 24) What grade(s) of fuel can be safely used in your aircraft? What are the colors of the recommended fuels? What happens to the color of the fuel if the two grades are mixed? *(PHAK 7-25)* **[Pre-solo]**
- 25) What could be another type of fuel grade that is also clear in color? *(PHAK 7-25)*

- 26) Why do we drain a sample of fuel before each flight? (PHAK 7-27) **[Pre-solo]**
- 27) Describe the landing gear system of your training aircraft. (PHAK 7-33, POH)
- 28) What type of braking system does your training aircraft have? (PHAK 7-34, POH)
- 29) Describe the electrical system of your training aircraft. (PHAK 7-30, POH)
- 30) If the master switch is turned off during flight, will the engine quit? Why? (PHAK 7-15) **[Pre-solo]**

National Airspace System & Local Airspace

- 1) What is the difference between controlled and uncontrolled airspace? (PHAK 15-2)
- 2) What are the different classes of airspace? (PHAK 15-2)
- 3) What are the requirements to enter the different classes of airspace? (PHAK 15-8, FAR 91.129, 91.130, 91.131, 91.135)
- 4) What are the weather minimums for the different classes of airspace? (PHAK 15-7, FAR 91.155)

5) What are the different types of Special Use Airspaces? **W.C.R.A.M.P.** (PHAK 15-3, AIM 3-4)

W -

C -

R -

A -

M -

P -

6) What are the different types of "Other Airspace Areas?" (PHAK 15-4)

7) When do we need a Mode C transponder? (PHAK 15-9, FAR 91.215)

8) David Wayne Hooks is surrounded by class D airspace. What are the typical dimensions of Class D airspace? (PHAK 15-2) **[Pre-solo]**

9) What are the following frequencies for the Hooks airport area? (ForeFlight, Charts Supplement, AIM 6-5-1) **[Pre-solo]**

KDWH Tower (West): _____

West Practice Area: _____

KDWH Tower (East): _____

KDWH LOC/DME: _____

KDWH Ground: _____

IAH VOR/DME: _____

KDWH Clnc. Del.: _____

KCXO LOC/DME: _____

KDWH ATIS: _____

EMERGENCY: _____

KDWH Unicom: _____

10) If you receive ATC instructions that you feel may compromise safety or will cause you to violate an FAR, what should you do? (FAR 91.123) **[Pre-solo]**

11) If you have a total radio failure, describe the steps/procedure for returning back to KDWH. (PHAK 14-23, AIM 4-2-13) **[Pre-solo]**

12) Describe the light gun signals and their color meaning. (PHAK 14-25, AIM 4-3-13) **[Pre-solo]**

13) What are the designated squawk codes for the following situations. (PHAK 14-25, AIM 4-1-20, AIM 6-2-2, AIM 6-4-2) **[Pre-solo]**

VFR: _____

Lost Comms: _____

Hijack: _____

Emergency: _____

14) In the event of poor planning or our landing conditions are not satisfactory, what should a student pilot do instead of forcing the landing? (AFH 8-12) **[Pre-solo]**

15) What is the “Go Around” procedure? (AFH 8-12) **[Pre-solo]**

16) Intentional slips could prove useful in an emergency landing or landing in an area with obstructions. Slips are used to _____ our descent rate without _____ our airspeed. (AFH 8-11) **[Pre-solo]**

17) All aircraft create wake turbulence. Heavy aircraft flying slowly in a clean configuration produce the strongest vortices. What actions should a pilot take to avoid wake turbulence? (PHAK 5-8, PHAK 14-28) **[Pre-solo]**

18) What is the traffic pattern altitude (TPA) for KDWH in terms of AGL & MSL? (PHAK 14-20, ForeFlight, Charts Supplement, AIM 4-3-3) **[Pre-solo]**

19) When operating at KDWH, pilots must make concise patterns. After takeoff, track the extended centerline out by choosing a point in front of your aircraft. Pilots should begin the turn from the departure leg to crosswind at _____ AGL, then executing a turn from crosswind to downwind at a _____ degree angle from the touchdown zone of the runway, remaining no more than _____ away from the runway. (PHAK 14-20, AFH 7-2) **[Pre-solo]**

20) How do you enter and exit the traffic pattern at an uncontrolled field? What radio communications are recommended? (PHAK 14-2, AFH 7-5, AIM 4-1-9) **[Pre-solo]**

21) How can you determine if a runway is closed? (PHAK 14-15, AIM 2-3-6)

22) What is the importance of hold lines? When can you cross them? Draw the hold lines you would encounter before entering and exiting a runway. (PHAK 14-8, AIM 2-3-5)

23) After landing, and when not instructed by ATC, when can you exit the runway? (PHAK 14-8)

24) There are several ways pilots can lower the risk of being involved in a runway incursion. List some ways that you as a student pilot can avoid a runway incursion. (PHAK 14-30)

VFR Cross Country Considerations

1) What preflight action is required by the FARs? **N.W.K.R.A.F.T.** (FAR 91.103) **[Pre-solo]**

N -

W -

K -

R -

A -

F -

T -

- 2) What is a NOTAM? (*AIM 5-1-3*)

- 3) Where can you find information about our destination airport and runway lengths?
(*PHAK 16-17*) **[Pre-solo]**

- 4) What is an alternate and why should we include them in our flight planning process?
(*PHAK 16-34*)

- 5) Except when necessary for takeoffs and landings, what are the altitudes restrictions when flying over the following areas: (*FAR 91.119*) **[Pre-solo]**

Congested:

Non-Congested:

Wildlife Area:

- 6) What altitudes should you use when operating under VFR in level cruising flight at more than 3,000' AGL? (*FAR 91.159*) **[Pre-solo]**

- 7) What is the minimum fuel reserve for day VFR flight? What about night VFR? How many gallons of reserve would you have remaining in both situations for your training aircraft? (*FAR 91.151*) **[Pre-solo]**

- 8) Fill in the correct cardinal direction (N W S E) that applies for each compass heading: (*PHAK 16-5*) **[Pre-solo]**

Compass reads 360°: _____

Compass reads 270°: _____

Compass reads 090°: _____

Compass reads 180°: _____

- 9) Identify the reciprocals of the following headings: (*PHAK 16-5*) **[Pre-solo]**

360°: _____

045°: _____

090°: _____

135°: _____

- 10) Pilots must use timesharing techniques to effectively divide their attention inside and outside the flight deck. Define the concept “see and avoid.” (FAR 91.113) **[Pre-solo]**

- 11) No person may operate an aircraft so close to another aircraft as to create a _____ . (FAR 91.111) **[Pre-solo]**

- 12) What has the right-of-way when two aircraft are on final approach to land at the same time at an uncontrolled airport? (FAR 91.113) **[Pre-solo]**

- 13) What action do you need to take if you are overtaking another aircraft and which aircraft has the right-of-way? (FAR 91.113) **[Pre-solo]**

- 14) What should you do if you are flying a head-on collision course with another aircraft? If another single-engine aircraft is converging from the right, who has the right-of-way? (FAR 91.113) **[Pre-solo]**

- 15) Describe Pilotage and Dead Reckoning. (PHAK 16-12)

- 16) If you get lost, what are the general procedures you should perform to find your position? (PHAK 16-34) **[Pre-solo]**

Weather

- 1) What are the standard temperature and pressure values for sea level? (PHAK 12-5)

- 2) Describe isobars. When looking at a Surface Analysis Chart, what does it mean when the isobars are close together? (PHAK 12-12)

- 3) How do surface winds flow in relationship to isobars? Why? What about winds aloft? (*PHAK 12-12*)

- 4) What type of clouds, visibility and precipitation would you expect from stable air? How about unstable air? (*PHAK 12-12*)

- 5) What are the general characteristics of low/high pressure areas? (*PHAK 12-7*)

- 6) With respect to isobars & pressure gradients, what are troughs and ridges? (*PHAK 12-12, PHAK 12-23*)

- 7) What must be present in order for a thunderstorm to form? (*PHAK 12-22*)

- 8) What are the stages of a thunderstorm? (*PHAK 12-22*)

- 9) What is wind shear? Why is it an operational hazard? (*PHAK 12-11*)

- 10) Describe dew point and why is it important to us? (*PHAK 12-13*)

- 11) Describe the types of fog. (*PHAK 12-15*)

Advection:

Radiation:

Upslope:

Precipitation-Induced:

12) How does icing affect aircraft performance. (PHAK 5-26)

13) Cloud cover is reported in percentages: **SKC:** no clouds; **Few:** >0 to 2/8; **Scattered:** 3/8 to 4/8; **Broken:** 5/8 to 7/8; **Overcast:** 8/8. What is the definition of a ceiling? Are clouds bases given in MSL or AGL? (PHAK 12-15, AIM 7-1-16) **[Pre-solo]**

14) What are the United Flight Systems student pilot weather minimums needed for a student solo flight? What about for cross-country solo flight? (Student Pilot's Handbook) **[Pre-solo]**

15) What is a METAR? When is it issued and how long are they typically valid for? (PHAK 13-6, AIM 7-1-31) **[Pre-solo]**

16) Interpret the following METAR: (PHAK 13-6) **[Pre-solo]**

**KDWH 261553Z AUTO 18010KT 10SM OVC018 08/07 A3028 RMK
AO2 PRESFR LTG DSNT N AND NW RAB03E14B38E51 SLP253
T00830072**

17) Should a student pilot fly in these weather conditions? Why or why not? (Student pilot's Handbook) **[Pre-solo]**

18) If an altimeter setting is not available at an airport, what setting should you use before departing on a local flight? (FAR 91.121) **[Pre-solo]**

19) What is a TAF? How often are they issued, how long are they valid, and what is their typical area of coverage? (PHAK 13-9) **[Pre-solo]**

20) Interpret the following TAF: (PHAK 13-9) **[Pre-solo]**

**KIAH 261552Z 2616/2716 01011KT P6SM -RA SCT008 BKN040
TEMPO 2617/2620 4SM TSRA OVC004CB
FM262200 07012KT 1/2SM +RA OVC005 BECMG 2700/2702
SHRA
FM270400 03009KT P6SM VCSH OVC005 PROB40 2706/2708
RASN
FM271000 36012KT 1SM -SN OVC008**

21) METARS and TAFs report ceilings in MSL or AGL? (PHAK 13-6, PHAK 13-9)

22) What is an AIRMET and what are the different types of AIRMETs? How long are they valid for when there are issued? (PHAK 13-11, AIM 7-1-6)

23) What is a SIGMET? Why are they issued and how long are they valid for? (PHAK 13-12, AIM 7-1-6)

24) What is a Convective SIGMET? Why are they issued and how long are they valid for? (PHAK 13-12)

25) Describe Winds and Temperatures aloft Forecast and how often are they issued? (PHAK 13-13)

26) Are the winds aloft forecasted or actual? How about true or magnetic direction? (PHAK 13-13)

27) Describe the Surface Analysis Chart. When are they issued, how long are they valid for, and what type of information do they give us? (PHAK 13-13)

28) Describe the Significant Weather Prognostic Chart. When are they issued, how long are they valid for, and what type of information do they give us? (PHAK 13-16)

29) Private certificated pilots are not allowed to fly into clouds without an instrument rating, but can fly over-the-top VFR. Can a student pilot fly above clouds? If yes, is it a good idea? (FAR 61.89) **[Pre-solo]**

30) In the presence of wind shear and gusty conditions, pilots should increase their final approach speed. Calculate the gust factor and provide the final approach speed for the following situation: Wind 150° at 10 kts gusting 20 kts. (AFH 8-18) **[Pre-solo]**

31) Complete the following table: (AFH 8-18, POH) **[Pre-solo]**

CURRENT WINDS	RUNWAY CHOICE	CROSSWIND COMPONENT	HEADWIND COMPONENT	UFS SOLO MINIMUMS MET?	AIRPLANE LIMITATIONS EXCEEDED?
170° @ 10 kts	17 or 35				
240° @ 5 kts	9 or 27				
230° @ 20 kts	14 or 32				

32) Explain the process for a takeoff and landing with crosswinds. (AFH 5-6, AFH 8-14) **[Pre-solo]**

33) When taxiing in all winds, flight controls must be placed in the correct positions to avoid being overturned. In what positions should the ailerons and elevator be during a right quartering tailwind? (AFH 2-16) **[Pre-solo]**

ADM, Abnormals, & Emergency Operations

- 1) What is the definition of Aeronautical Decision-Making (ADM)? (PHAK 2-2)

- 2) With respect to aviation, what are the hazardous attitudes we MUST look out for? What are their antidotes? (PHAK 2-5)

- 3) What are some of the ways we can mitigate risk? *I.M.S.A.F.E., P.A.V.E., 5 P's* (PHAK 2-8)

I -	P -	P -
M -	A -	P -
S -	V -	P -
A -	E -	P -
F -		P -
E -		

- 4) What could be happening to your engine if the oil temperature is increasing and the oil pressure is decreasing? (PHAK 7-16) **[Pre-solo]**

- 5) During takeoff, what general steps should you follow if you have an engine failure in the following scenarios: (AFH 5-12, AFH 8-26) **[Pre-solo]**

Before Rotation:

After Rotation:

Cruise Flight:

- 6) In the event you experience an engine failure and you have the option to land in a field or water. In which order would you choose: Short Grass, Tall Grass, or Water? (AFH 17-2, AFH 17-6)

- 7) What steps do you take in the case of a suspected or real electrical fire? (AFH 17-8, POH, Checklists) **[Pre-solo]**

8) If the low voltage light illuminates in flight and you have a negative (or “0”, depending on your training aircraft) ammeter indication, what aircraft equipment is faulty? (PHAK 7-30) **[Pre-solo]**

9) What steps would you take to conserve power in the event of an electrical failure? (AFH 17-11) **[Pre-solo]**

10) Describe what you would do in the following Fire Scenarios: (AFH 17-7, Checklists)

Cabin fire:

Engine fire on start-up:

Engine fire in-flight:

Smoking bag in the back seat:

11) During takeoff and right at rotation speed, _____ happens. Do you abort the takeoff or continue? (AFH 17-13, AFH 17-14, Follow up with your instructor) **[Pre-solo]**

Cabin door opens:

Oil pressure gauge shows “0”:

Window opens:

Landing gear tire pops:

Low volts light illuminates/amp gauge shows “0”:

Communications & Phraseology

- 1) Complete the following table for the Phonetic Alphabet & numbers by writing out what we say for each letter/number: **[Pre-solo]**

A		M		Y	
B		N		Z	
C		O		1	
D		P		2	
E		Q		3	
F		R		4	
G		S		5	
H		T		6	
I		U		7	
J		V		8	
K		W		9	
L		X		0	

- 2) Complete the following table for the definition or response for each of the following ATC and Pilot response terms/phrases: **[Pre-solo]**

Term/Phrase	Definition/Response
“Hold short”	
“Hold short 17L approach”	
“Hold short of the sea lane”	
“Taxi to the triangle, expect 17L”	
“Taxi to 17L, contact tower 118.4”	
“Expedite across 17L approach”	
“Line up and wait”	
“Expect 17R at Echo departure”	
“Three minute wake turbulence delay”	
“Cleared for immediate takeoff”	
“Fly runway heading”	
“Make left closed traffic”	
“Turn an early crosswind”	
“Cleared for the option”	
“Cleared stop and go”	
“Cleared to land”	
“Cleared touch and go”	
“Change to runway 17L”	
“Go around”	
“Cross midfield to enter the left downwind for 17L”	



"Extend downwind, I'll call your base"	
"Report abeam the tower on downwind"	
"Proceed direct to the numbers"	
"Make short approach"	
"Square your base to final"	
"Intercept 3 mile final"	
"At pilot's discretion"	
"Make a left 360"	
"Low level helicopter activity west of tower"	
"Traffic on base for the parallel"	
"Traffic in sight"	
"Negative Contact"	
"Change to tower frequency 127.4"	
"Radar contact, say altitude"	
"Taxi to the ramp"	
"Monitor ground .8"	
"Exit the high speed if able"	
"Roger"	
"Standby"	
"Wilco"	
"Affirmative"	
"Go ahead"	
"Closed traffic"	
"Ident"	
"Mayday"	
"Stuck mike"	
"Unable"	