

NAVIGATION:

AS IF ANYONE WOULD WANT TO FLY THERE!

FLIGHT FROM "STANHOPE" TO "BELLEVILLE" TO "OTTAWA INTL."

- 1) - AOBAM OF "NALIBURTON" @ "TIME", AOBAM OF "APSOY" @ "TIME" - WHAT IS ETA?
- 2) - FLIGHT SUPP. QUEST. ON "BELLEVILLE" AIRPORT: WHAT LIGHTING, CUSTOMS, L/H OR R/H CIRCUITS, ETC.  
(CHOOSE ALL CORRECT STATEMENTS FROM LIST.)
- 3) - FLYING OVER PERTH @ \_\_\_\_\_ ft. WHAT AIRSPACE ARE YOU IN?  
(OCDS)
- 4) - FROM PERTH TO OTTAWA VOR, WHAT RADIAL DO YOU DIAL IN?
- 5) - GIVEN (6.5) G.P.H., (1:40) FLIGHT TIME, 2 GALLONS FOR TAXI & CLIMB @ STANHOPE, 2 GALS. FOR TAXI & CLIMB @ BELLEVILLE, WHAT IS MIN. FUEL REQUIS. FOR DAY VFR.  
(DON'T FORGET 30 MINUTE RESERVE).
- 6) - IF YOU FLY ~~AT~~ A HEADING OF 062(?) FOR A TRACK OF 051(?) WHAT IS THE RECIPROCAL HEADING TO FLY ~~ON~~ ON RETURN?
- 7) - WHAT IS COMPOSITION OR TRIANGLE OF VELOCITIES FOR WIND & ~~DRIFT~~ DRIFT PROBLEMS COMPOSED OF?  
(VARIOUS PAIRS OF INFO → CORRECT SELECTION IS: (HEADING, TAS), (WIND & WIND SPEED)  
(TRACK & GROUND SPEED)
- 8) - 15 NM NW OF BELLEVILLE, WHOM DO YOU CONTACT FIRST?  
(VARIOUS TWR & UNICOM & FSS FREQUENCIES FOR ANSWERS)  
- I SAID TRENTON TWR AS YOUR ABOUT TO ENTER THEIR CZ  
(SSW FB NS)
- 9) - AFTER CONTACTING BELLEVILLE, WHAT IS THE CORRECT ENTRY TO THE TRAFFIC PATTERN? FOLLOWS & NOT ~~OTHER~~ OBVIOUS CHOICES LIKE RIGHT HAND DOWNWIND & STRAIGHT IN ON BASE LEG, ETC. (NO L/H DOWNWIND CHOICE)  
& DETERMINE THAT RUNWAY - IS THE ACTIVE RUNWAY,
- 10) - DOUBLE TRACK QUESTION: HOW LONG & AT WHAT HEADING DO YOU FLY TO GET BACK ON COURSE & WHAT WILL NEW HEADING BE AFTER YOU ARE ON COURSE?

(NAVIGATION CONC)

- 11) MH QUES: GIVEN WIND, TAS  $\neq$  TRACK, WHAT <sup>MAG.</sup>  $\nearrow$  HEADING  $\&$  G.S. WILL RESULT. (DON'T FORGET TO ADD MAGNETIC VARIATION!).
- 12) WHAT IS MAX. MEF ENCOUNTERED FOR TRIP TO STANHOPE TO BULLSVING. TO OTTAWA.
- 13) WHAT DOES "LAPSE RATE" REFER TO:
- ✓ 1) TEMP.
  - 2) PRESSURE
  - 3)
  - 4)
- 14) WHICH OF THE FOLLOWING IS THE MOST LIKELY <sup>THE</sup> CAUSE OF GROUND EFFECT:
- 1) LACK OF CUSHIONING EFFECT ON HIGH WING AIRCRAFT.
  - 2) AIRCRAFT TAKES OFF BUT SLOWLY SETTLES BACK ONTO THE RUNWAY.
  - ✓ 3) AIRCRAFT TAKES OFF BUT IS UNABLE TO CLIMB.

Two aeroplanes converging at the same altitude. Who gives way ?

Blocked pitot tube. Which instruments fail. Selection given.

Vsl indicated on the ASI ?

Recreational pilot permit holder may fly . Number of passengers Number of seats VFR daytime only within Canada.

Centre of pressure approaching a Stall. Where does it move.

Low octane fuel in a aircraft engine causes detonation.

Type of weather expected on lee side of mountain ridge. (air)

Relative humidity.

What find of weather would you expect to find with the passing of a weak ridge of high pressure.

Would you attempt to take off with an approaching thunderstorm .

Radiation cooling causes ?

Given winds aloft at 3000 6000 9000 What was windspeed and direction at 7500'

From an area forecast

Ceiling at given airport at given time . Above ground level or above sea level. Almost at the end of the forecast period.

When was the forecast valid. Starting time and for how long.

When taking any Rx drug before flying wait 8, 24, 48 hours or not before consulting Doctor.

Weight and balance calculation using the Cessna Loading graph and Cessna C of G graph some of the weights and some of the moments were missing. Calculate if over or under weight combined with if the C of G was inside or outside of the envelope.

Cross country flight from *St. Thomas B-* To Barrie. Single leg.

Fuel required for the flight . Answers included exact amount only and exact amount plus 45 minute reserve.

Depart at time given, TAS 102kts, en route, on track and over a small town at *Bright \** abandoned railway track at given time. Calculate revised ETA Add 1 minute for each 1000' of cruise altitude.

En route you pass over an airport Control zone[ (D)3000' ] at 3500 do you need a clearance? *Kitchner*

Arrival procedure at Barrie airport. Uncontrolled Airport without mandatory frequency. CFS page given showed right hand circuit for runway 10. The active runway for your arrival . NOTAM referring to work on the runway displacing the threshold by 1000' until *????Z*. Will you have the whole runway. Part of it. Runway closed or?

Landing approaching a DOWN SLOPING runway. High Low near or Far.

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Will you have the whole runway. Part of it. Runway closed or?

Landing approaching a DOWN SLOPING runway. High Low near or Far.

**If FSS gives you altimeter setting of 29.82. And the pilot inadvertently sets the altimeter at 28.82. Will the ALT read high 1000' or low 1000' or two other answers.**

**Your planes maximum crosswind capability is 12kts at 90 degrees  
What is the maximum angle of a 20 kt wind and still be within the limit.**

**Except ultra-lights and balloons what documents are required to be carried on a Canadian privately registered aircraft. In flight.**

**Special VFR minimums**

**Wake turbulence from?- large fast moving, only jets, aircraft and helicopters, and one other.**

**CYR can you fly through it ?**

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34) Which of the following would best describe the surface wind conditions immediately after passage of cold front?

- 1) Direction will change & velocity remain constant
- 2) Winds will rise & increase ✓
- 3) Winds will back & decrease
- 4) Winds will rise & decrease

35) Under which conditions can a vehicle operate on the manoeuvring area at an airport?

36) Which of the following would best represent a condition of SIGMET?

- 1) Hail
- 2) Notice of significant meteorological conditions
- 3) Rainstorm
- 4) Thunderstorm

37) Using the magnetic compass when do you get the most swing to the north?

- 1) Turning east - northeast
- 2) Turning south - southeast
- 3) Turning north - northwest
- 4) Turning west - northwest

39) Using the Ottawa VORTAC, what radial is the tower of Sutterville on?

40) If you are above NORLAND & wish to contact a Flight Service Station, for weather info, the closest FSS is?

41) The highest elevation 10 nm either side of track from ATHERLEY - BANCROFT.

42) Complying with cruise altitude order what is the lowest usable altitude on east bound flight from Athertley to Bancroft.

2 Questions on Lesson Weight & Bal. - 2 separate  
parts.

- 1 Density Altitude
- 1 Take off Distance
- 2 Crosswinds

How many gallons of fuel needed to fly from Boise  
to Atlanta.

Drift Correction (2)

Joining circuit would you  
cross mid field at 1000'  
~~use mid field at 1000'~~  
Join downwind right 1000 ASL RCL  
" " left 1000 +  
- engine oil overheating what is cause  
Leaving Carb heat on during taxi - what  
happens  
Carb heat - mixture lean, rich  
only one ~~two~~ drops before what could be  
the cause



Strong wing plane with nose gear most likely to be pushed on <sup>when turning</sup> most with what wind direction Upwind downwind

Debi

1) What documents required on board

2) To carry passengers at night

3) Oullia-Barnie-to-Hanover-to-London fuel required from Oullia to Hanover gave consumption as 3.5 flight time 1 hr 55 min. <sup>2.0 for</sup> climb, taxi, run up. in both Oullia & Hanover. For 45 min what is requirement.

~~2.5~~ ~~plus~~ ~~2.0~~ ~~plus~~ ~~2.0~~ was worded that at first the run up, taxi & climb only required 2.0, ~~when in fact~~

4) Weight & balance to see if plane within limits. C. of G. weights & moments missing. Refer to graph. \*Fuel weight in question, lastly missed.

5) E6B questions on ground speed, time en route, ETA. very straight forward.

slight typo & layout.

6) Opening & closing angle for course correction. They gave the degree of course, I only needed to determine second degree & make new course heading.

1) VOR question if fly a heading of  $180^\circ$  flying to VOR. Would you set OBS to 180 & TO 180 from, or opposite heading TO or from.

8) From Hanover to London what air space you would fly in.

9) Using hypsometric tints what elevation you would be flying from — to what —

10) From Oullia given co-ordinates to find a town then given 23 nm SW find railway tracks then time en route to Hanover.

11) Elevation of different airports.

12) Using flight Supplement were there Customs Services, flight service on site, lighting of runway plus if pilot operated, & what frequency to activate. What kind of circuits R or L.

13) Crosswind component, asked to make a discussion & use different runway

2. Turning and Acceleration Errors. On an accelerated turn to or from the north the compass? lags from north, south, east, west. TP says, "on turns to or from the north the compass lags behind the actual heading. Remember ANDS, accelerate = north indications, decelerate = south indications.
3. Carb Icing. Under which conditions would the most serious carburetor icing be expected? Choices include 4 temperature ranges and high or low humidity. TP says, "-5C to 15C, high humidity.

Note: It appeared that all the questions on general knowledge are covered in the practice examine provided by the Langley Flying School.

## NAVIGATION

Comments: This portion of test did not require a navigation log. However it is of value to do one with the information they provide so that you do not miss something. An example of this is where you have your track and are given the wind direction/speed and TAS. The question simply asks what your compass heading will be? Unless you document down info on the log you may fail to remember to add the magnetic variance (add west". The four choices also provide the heading which doesn't include adjustment for variance.

The navigation portion calls for a trip from Barrie airport to Hanover airport for a stopover and then to London based at 4,500 feet. You are required to provide the following answers:

- 1) The highest elevation based along the flight path.
- 2) Based on the Hypsometric tints chart. What is the range of elevation from Hanover to London?
- 3) After departing from Barrie you are given the times 15:15 and 15:34 to go from Middlegate to another small community. You are asked what your new ETA will be to Hanover. Be careful not to just subtract the distance from Barrie to the small community from the total distance but rather measure from there to Hanover.
- 4) You are asked what class of airspace you fly in from Hanover to London.
- 5) You are given one double track question asking only how long you would fly to be back on track.
- 6) From Hanover to London you are off course and must calculate using the closing angle method.
- 7) You are asked that on joining V342 what heading you would be on to fly to the VOR at London airport and whether the OBS would read To or From.
- 8) There is one question on fuel consumption. Be careful to read the question. You are required to stop in Hanover so you have to add the fuel for climb not only at Barrie but again at Hanover. And don't forget the 30 minutes fuel required as well for daytime flight.
- 9) There is one weight and balance question using the charts to calculate moment. Be careful it could be easy to miss the fuel. On the center of gravity

moment envelope. Be careful because the top line of the loaded aircraft moment range only goes to 1650.

- 10) There is a cross wind question with runway 19. Cross wind at 080 and 25 knots. Can you land? Would you use runway 01 instead? Are would you not land? You have to calculate out cross wind for both runways. Stall speed is 60 knots.
- 11) There is a question on takeoff distance at 4000 feet and 20C. Question includes headwind 18 knots and grass runway. Be careful here to add the extra percent to ground roll for both issues. For headwind have to increase % for each 9 knots.
- 12) Be familiar with information from Canada Flight supplement for Hanover. Does airport have FSS? Is customs available? What lighting? What circuit procedure in affect?
- 13) There is a question on NOTAM. 1,000 feet of runway closed. You land at 1800Z? Will the runway be open or closed. Know how to read NOTAMS!
- 14) You have changed your ETA to Hanover what station would you contact to notify?

#### FLIGHT OPERATIONS

1. You are descending into a Headwind, the angle of approach will \_\_\_\_\_ and the groundspeed will be \_\_\_\_\_. Answer steepen and reduced.
2. You have just taken off and experience wind gusts. Will you reduce power, increase power, will power stay the same and what will happen to angle of climb? **Study low level wind shear!**
3. What is the sequence required in an overshoot? Apply full power, accelerate to a safe climb speed in level flight, reduce flap extension as required and raise the nose to the climbing attitude.
4. You are flying at 4500 feet. What will be your wind direction and wind speed? Need to interpolate from 3000 ft. and 6000 ft.
5. Question if the center of gravity is too far aft, will the aircraft be stable, unstable, what about stall? Answer is the aircraft will be extremely unstable when in slow flight and when approaching a stall.
6. You are in a spin? At what point do you raise the flaps? First, after you have leveled aircraft off, once recovered from dive?
7. Ground effect once above 18 feet what is effect and danger? As ground effect stops the result is that an aircraft can become airborne quickly, but without sufficient airspeed, and the aircraft is in danger of stalling.
8. Question on wake turbulence behind a heavy aircraft. When does wake turbulence begin? At rotation, after rotation? Etc.

#### WEATHER

Comments: Know all three weather reports Area Forecast, Metar and TAF. Questions on when report period is for as well as interpreting what the weather will be like at certain time. Question on what freezing level will be at certain time.

Toronto

Red Deacon

Barry or O Barry

started @ London - St Thomas

what kind of weather would you expect with a weak ridge coming through.

Detonation

No Engines or Performance

assume

XC time assume 1 mint / 1000 ft

loading graph and

x wind calculation

- NOTAM Question would

it be in effect for flight

Gordy  
XC

75  
90

taxing with carb heat on

CB

what type of cloud towers  
& forms on Anvil.

Rite weather symbols  
cluded  
warm

Gordy Vertical Turbulence  
is caused by

Rod Deacon

if FSS give 29.29 and you  
in advertantly did dial 28.29  
you will you be your Alt  
read 1000' high 1000' Low

Jamie

White Lake → Stanhope → Kingston  
5th is a weather forecast for  
when.

fog is caused by

Advection fog is call  
caused by

what do winds do when  
a cold front passes by



Melanie

VORTAC OTTAWA  
what was the radial  
you were on & to or from  
if ever Perth.

Stens

What's a Squal Line  
~~and what would~~

Chilla → Hanover → London

if there was a squal line  
at the beginning of a cold  
front what would you  
expect.

What are the factors affecting  
density  $\rho$  of

If carb heat is on during Tasci  
how does it affect the engine

Rite Perry Bay → Belville → Kingston

Who

up sloping runway in the  
rain. To Hi low

led down sloping Run

Run with 1 set of lights  
does this comply with  
rules

mel time from Stanhope to  
Asplee Lewis E.T.A

Sterling VOR how would  
~~Perry Bay~~ the needle look when  
dialed into VOR

Ice on wings

Stalling in a turn  
what happen in to AS

increase in gliding turn  
What Increase in Climbing turn

Route Prognosis

Runway <sup>section</sup> is closed Local  
if you arrive at 15Z would  
if you have the whole ~~so~~  
on runway it to use when  
you arrive.

Higher octane rating what  
does it do to your plugs  
does it to cause the engine  
to run lean  
Rich  
foul plugs —

Given Clearance to circuit you are told there are 2 aircraft in circuit what do you do  
Join in - any where - become #1 ect.

Joining uncontrolled circuit

During climb out you notice you are on collision course <sup>with</sup> another A/C what do you do

Tell what Peterborough offers for services. ~~FF~~ CFS Question

75% Area Forecast  
& Prognosis  
& Freezing level

Jamil - Toronto

~~Stanhope~~ - 1

White Lake  $\rightarrow$  Stanhope  $\rightarrow$  Kingston

No

weather

North Bay

Toronto

Trenton

Peterborough

Stanhope  $\rightarrow$  Kingston  
in Sterling you notice weather  
in Kingston when do you  
notify FSS.

Aerobatics & Normal WT Balance

depending on pencil for  
Stanhope you are going  
on AC what do you do

who will you show your  
license to

Alt testing question

what type of AC can you  
fly as Sec Pilot

Special VFR - where can  
you fly Special VFR

Flight Plan - In relation to  
Country do you need to fly  
file flight Plan

what airspace where you in  
near border depicting Class E

Rehydration & Cooling  
↓ liner on upper level window

- Red Deacon

- No Drift or Course correction

- 3500' over control zone do  
you require clearance to  
cross.

what borrowing

Pits - if pits used what instruments  
would failed.

Stall clear where on AS indicated

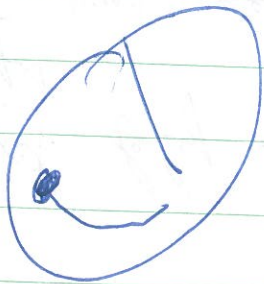
Turbulence What type of plane  
creates Turbulence

Converging Air Craft

fuel consumption question



what to do to make



Steady right turn

Q Given density ALT of  
30.12 with which indicates  
1000' what was the pressure

Alt. 1200

1020

950

800

Relat

It joining circuit at Controlled  
Airport.

Melanie 60% General Knowledge  
Toronto  
Stanhope → Bellville & Ottawa  
X Wind head... & Headwind  
RWY 27 310 @ 30

wheel borrowing

Magnets what happens when you  
get a broken wire from starter  
to mag

Lite <sup>STAR</sup> icing

ante histamines of Over the counter  
6

12

donot fly unless Aviation Med doc  
says

6.5 burn per hour full calculation

NAV. FROM BARRIE → ATHERLEY → BANROFT → OTTAWA

STOP ATHERLEY TO DROP OFF PASSENGERS

(613 523-2187)

- 1) Assume you are on final approach for landing, when controller tells you - "pull up & go around":
  - A) The controller has given an instruction, which must be complied with (except in an emergency)
  - B) The controller has given a clearance, which must be complied with (except in an emergency)
  - C) You must request an instruction for an overshoot, to confirm you understand the clearance
  - D) You should request a clearance for an overshoot
  
- 2) To act as pilot in command by night in an aircraft carrying passengers, a private pilot must have completed \_\_\_\_\_ take offs and landings by night within previous \_\_\_\_\_ months.
  - A) 6 5
  - B) 5 5
  - C) 12 12
  - D) 5 6
  
- 3) The minimum horizontal distance from cloud in a control zone, for VFR flight is:
  - 1) 3 miles
  - 2) 1 mile
  - 3) 2 miles
  - 4) 2,000 ft
  
- 4) "Night" is defined in Air Regulations as the period:
  - 1) from 1/2 hour before sunset to 1/2 hour before dawn
  - 2) when the center of the sun's disc is less than  $6^\circ$  below the horizon
  - 3) 1/2 hour after sunset to 1/2 hour before dawn
  - 4) 1/2 hour after sunset to 1/2 hour after dawn

5) The Cruising altitudes Order only applies to aircraft operating:

- 1) above 3,000 ft. AGL
- 2) above 3,500 ft ASL
- 3) above 3,000 ft ASL
- 4) above 3,500 ft AGL.

6) While approaching to land, rain on the aircrafts windshield will make runway appear:

- 1) Higher than actual height
- 2) Lower than actual height
- 3) Has no effect
- 4) Further away from you

7) On the airspeed indicated the bottom of the green arc indicates:

- 1) maximum endurance speed.
- 2) power off stall with flaps retracted
- 3) Max. range speed
- 4) Power off stall with full flaps retracted

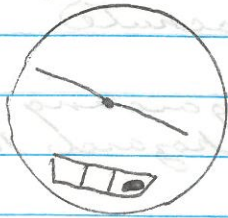
8) The pilot is instructed to squawk 1222. The proper response to this request is:

- 1) Adjust 1222 on the Transponder for a minute or two & then go back to 1200.
- 2) Adjust 1222 on the Transponder
- 3) Adjust 1222 on Transponder & press ident button

9) After a donation of blood what must happen before you can act as a crew member in a plane:

- A) Physician must be consulted
- B) 24 hours must pass
- C) 12 hours must pass
- D) 48 hours must pass.

10) The following turn co-ordinator indicator represents



- A) a skid to the left
- B) a skid to the right
- C) a slip to the left
- D) a slip to the right

11) A pilot has been "cleared to land" immediately after the landing of a large heavy aircraft. He should

12) A pilot notices a distant object as a small mark on the windshield. If the small mark is another aircraft, a mid-air collision could occur when:

- 1) the mark moves slowly down windshield
- 2) the mark remains stationary on windshield
- 3) the mark moves slowly up windshield
- 4) the mark moves slowly to - word center of windshield

13) A compass is swung to minimize what kind of error:

- 1) North-south turning error
- 2) acceleration error
- 3) Deviation error
- 4) Precision error

14) The term "maneuvering area" means:

- 1) Areas that include aprons only
- 2) Areas that include taxiways & aprons
- 3) Areas that include runways, taxiways & aprons
- 4) Areas that include taxiways & runways

5) According to Air Regulations when would you be allowed to drop an object from an aircraft in flight?

- 1) When it is attached to a parachute
- 2) Under no circumstances
- 3) There is no regulation regarding this topic
- 4) When it does not create a hazard to persons or property on the ground.

16) A NORDO aircraft receives a flashing green light from the tower. The meaning of this light signal on the ground & in the air are respectively:

- 1) Return to starting point on aerodrome / Continued circling
- 2) Cleared for taxi / Return for landing
- 3) Cleared to take-off / Cleared to land.
- 4) Taxi clear of take-off area / do not take off for time being.

17) Above which altitude must a flight crew member wear an oxygen mask at all times & how much oxygen should be on board & how much oxygen should be on board aircraft?

18) Which of the following indicate the appropriate documents which must be on board the aircraft in flight:

- A) AIP
- B) Flight Crew Licence
- C) Technical Log
- D) Restricted Radiotelephone Operator Licence
- E) Aircraft Radio Station Licence
- F) Aircraft manual
- G) Journey Log Book
- H) Cert. of Airworthiness
- I) Part of Registration

19) Two aircraft on final approach to land, one is lower than the other, who has rights of way?

- 1) Lower one must leave circuit
- 2) Lower one must overshoot
- 3) Higher one has right of way.
- 4) Lower one has right of way.

20) The responsibility for seeing that appropriate A/D's aeronautical directives are complied with are:

- 1) Aeronautical Maintenance Engineers
- 2) The Minister
- 3) Owners of aircraft
- 4) Pilot

21) When the symbol U2 is used on the map for communications the proper frequency to use is:

- 1) 126.7
- 2) 123.2
- 3) 122.9
- 4) 123.0

22) The attitude indicator on the instrument panel is adjusted for:

- 1) attitude
- 2) Deviation
- 3) Magnetism
- 4) Pressure

23) For a trip, the most appropriate line of longitude to measure trip direction would be:

- 1) the one closest to departure
- 2) any one
- 3) the one closest to the middle
- 4) the one closest to destination

BASED ON EXAM INFO SUPPLIED ON MONT-JOLI QUEBEC.

24) The best answer referring to availability of customs at MONT-JOLI QUEBEC is:

- 1) Avail Monday - Friday 1300 to 2100 Z.
- 2) Not available
- 3) Available Monday - Friday 1400 - 2200 LOCAL TIME
- 4) Available Monday - Friday 1400 - 2200 Z.

25) When arriving at MONT-JOLI, QUEBEC the appropriate frequency & distance for radio contact for landing is:

- 1) 115.9 5 NM
- 2) 126.7 15 NM
- 3) 122.3 15 NM
- 4) 122.3 5 NM.

26) What is the weight of 95 litres of AVGAS with an outside air temp of +20 degrees C?

27) At night in what area would you expect radiation fog?

28) What does the term CAVOK mean.

29) What are the main causes of "wheelbarrowing"?

30) At what time can your LET be legally tested & for how long?

31) Certain Regulations are applicable to aircraft during operations in the "ADIZ". These rules apply to aircraft flying at a:

- A) True airspeed of 180 knots or more, less than 4000 lbs.
- B) True airspeed of 180 knots or more, less than 4000 lbs.
- C) Indicated airspeed of 180 knots or more.
- D) True airspeed of 180 knots or more.

32) Which of the following is the most appropriate recovery from an inadvertent spiral dive?

33) The pilot of an aircraft in flight encounters a rough engine & small power loss. After applying carb heat there is a further loss of power & engine begins to run rougher. The appropriate action to be taken is to:

- 1) Move carb heat to cold position
- 2) Lean mixture
- 3) Enrich mixture
- 4) Leave carb heat on hot position.



34) Which of the following would best describe the surface wind conditions immediately after passage of cold front?

- 1) Direction will change & velocity remain constant
- 2) Winds will rise & increase
- 3) Winds will back & decrease
- 4) Winds will rise & decrease

35) Under which conditions can a vehicle operate on the manoeuvring area at an airport?

36) Which of the following would best represent a condition of SIGMET?

- 1) Hail
- 2) Notice of significant meteorological conditions
- 3) Rainstorm
- 4) Thunderstorm

37) Using the magnetic compass when do you get the most swing to the north?

- 1) Turning east - northeast
- 2) Turning south - southeast
- 3) Turning north - northwest
- 4) Turning west - northwest

39) Using the Ottawa VORTAC, what radial is the tower of Sutterville on?

40) If you are above NORLAND & wish to contact a Flight Service Station, for weather info, the closest FSS is?

41) The highest elevation 10 NM either side of track from ATHERLEY - BANCROFT.

42) Complying with cruise altitude order what is the lowest usable altitude on east bound flight from Athley to Bancroft.

2 Questions on Cessna Weight & Bal. - 2 separate  
ports.

- 1 Density Altitude
- 1 Take off Distance
- 2 Crosswinds

How many gallons of fuel needed to fly from Basie  
to Ottawa.

Drift Correction (2)

## Intel File

### Commercial Pilot License (Aeroplane)

Submitted: B. Orłowski

17/10/2002

### Test Num: CPAER 016 01

**Overview:** Generally a difficult test there wasn't a single question that was straightforward often combining several different sections of knowledge in to one question. If you just know your basics you'll crash and burn. If you know your basics well and have studied some of the more obscure rules, regulations, calculations, etc. then you will do okay. They assume you have done great on your private pilot exam and anything in relation to that exam is, either, not covered or is compounded by other factors. Every new topic presented to you since you started the commercial should be studied with detail. Always read the question and each answer one word at a time.

### TC Subjects for recommended study list given to me

(More specific details to questions in brackets):

- Calculate Load factor given bank (100kts stall in 60 deg. Bank now is...)
- VFR Fuel Requirements (including reserve in commercial ops)
- Laminar vs. conventional airfoils (Laminar is 50% of chord)
- Compare operation of a turn and bank indicator and a turn coordinator (yaw, roll, both?)
- METARs (Know your codes)
- NOTAMs (Know your codes)
- TAFs (Know your codes, esp. weird ones)
- Rhumb Line (I know it sounds silly, but still know it)
- VSI inaccuracies (Lag etc when is it most accurate and least accurate)
- Passing through fronts (Back or Veer wind/inc or decr turbulence/ Immediately Changes vs. Progressive)
- Fuel consumption and power graphs (Keep to 65% or 75% power selections forget 70%)
- Atmospheric Pressure levels and effects on Altimetry (temp, pressure, alt, etc/ higher or lower. What about variations with respect to pressurized Aircraft and Failures)
- Alcohol exposure and long term effects. (Alcohol stays in? blood, brain, inner ear, something else)
- Altitude affects lift/drag ratio (at altitude, Change Angle of attack, etc)
- Temperature effects on true vs. indicated altitudes. (High to low or Warm to cold look out below)
- VOT testing (straight forward)
- Crew member requirements (There is a lot you must know, know it all. They use the word 'Commercial Air Service' on the test. It's there. Do you know what it is?)
- CRFI index (yes it is on a scale from 0-1, but you also need to use this number on the chart to determine other things such as X-wind. One of those best answer questions)
- GPS how does it work (GPS satellites use? Orientation or distance or both to find position)
- Privileges of Commercial Pilots (There's lots to know)

- Wind, TAS, and GS calculations.
- Carbon Monoxide (Some options in question Feelings of well being? Is small exposure okay? )
- ADF Track interception (Complicated, fixed card ADF questions including determining your track and intercepting tracks at non-standard angles from as little as 5° off)
- Interpret VOR indications relative to an airway (You are not currently on)
- Flight crew qualifications required for 'Commercial Air Services' (Yes that word again)
- VFR flight plan filling and filling out (How do you indicate stoppages?)
- Standard VFR transponder codes (1200 VFR below 12 500' ASL, 1400 above)
- Falling Rain and Humidity (Funny, because the question was alluding to turbulence not low level fog, mist and bad vis)
- Serviceability of NDB (This was a private NDB that was giving a strong signal but which you could not receive an audible ID signal the NDB's ID was D9 what do you do? Use? y/n why)
- Warm Unstable Air and weather conditions associated with it.
- Weather changes around frontal passage (Cold front over warm ground)

#### Other tips:

- Make sure you know the difference between Flight duty time, Stand-by, and Flight time.
- Make sure you know the Max flight times in a given time period. (1200hrs per 365 days)
- VFR-OTT and other minimum equipment requirements
- Landing or taking off on water? Equipment needed. Life jackets? Raft? Water ELT?
- Map work but look at more advanced stuff ie VGF
- DME, VOR, TACAN. UHF or VHF?
- DME limitations. Can you use for GS and when?
- With regard to flying altitudes over 3000' it's AGL and magnetic track. Try get used to the idea of using AGL or ASL when referring to any altitude in your studies. For example: Class 'B' airspace generally starts at 12 500' ASL...
- Go over the SIGMET weather codes. Note that some are combined to better define types of precipitation. Small triangle ▼ (Actually with a clear centre) with a '\*' above it would be Snow, for example.
- The GFA questions were trying to be tricky, pay attention to the time Issued vs. the Validity period. Basically came down to reading the question and answer carefully.
- Remember CB, TCUs and ACCs imply significant turbulence and icing. Heights are ASL unless otherwise noted. And CBs imply Low Level Wind Shear.
- Always try to double check answers after you finish. The average person fails by ONLY one or two questions in a particular section. I personally had the worst score on the section I felt best about and therefore did not bother to check.

The following is a summary of questions and scenarios as remembered from this exam

**Air Law**

Cruising altitudes in the Southern Domestic airspace start at \_\_\_\_\_ and are based on

- 3000 AGL, true track
- 3000AGL, magnetic track
- 3000ASL, magnetic heading
- 3000ASL, magnetic track

For entry into the ADIZ the following is true

- A flight plan is not required if the cruising speed is below 180 kts.
- ATC must be notified if you are more than 5 nm off track
- A clearance is required before entering the ADIZ
- A 2way radio is required for flights into the ADIZ

A flashing red light signal means, to aircraft in the air \_\_\_\_\_ and on the ground \_\_\_\_\_

- (selfexplanatory)

Your aircraft's ELT is u/s and you don't have a MEL, you

- Cannot fly
- Can fly if the ELT is temporarily not available e.g. removed for maintenance
- Can only fly within 25nm from departure point
- ?

Emergency training has to be provided to crew by an operator every

- 3 months
- 6 months
- 12 months
- 24 months

What is the maximum altitude for a flight without oxygen on board?

- 10,000 ft
- 13,000 ft
- 20,000 ft
- ?

What would be used as proof of airworthiness for importing an aircraft?

- Special purpose certificate
- Special purpose permit
- Standard CofA
- ?

**General Knowledge**

This part refers back to above scenario.

One simple weight and balance scenario is given, no complications, and at the alternate destination you have to recalculate after picking up another passenger and after calculating your fuel burn to that point (you are given straight forward information "... 13 GPH for cruise + 3gal for taxi/climb...", don't forget your VFR reserve on the initial calculation). After recalculation you find your T.O. weight okay but your c.g. out ; no corrections required.

**Other questions:**

- Results of oil pressure loss on counterbalanced constant speed prop
  - Course pitch
  - Fine pitch
  - Feathering
  - ?
  
- 3 different questions regarding angle of attack, relationship to speed, load, icing
  
- What is the working principle of a directional gyro?
  - Rigidity in space
  - Gyroscopic stability
  - Precession
  - ?
  
- Totally blocked pitot system results in
  - Overreading in climbs, underreading in descents
  - Underreading in climbs, overreading in descents
  - No indication
  - ?

**Considerations for startup after oil dilution**

In general the test exams from LFS (including Dave's infamous final exam) have been excellent training aids. In addition to Dave's "Commercial Pilot" Textbook you should prepare for weather charts and symbols, otherwise it's quite complete.

The final exam in Culhane's "Commercial Pilot" - Text Book as well as the 6 exams in Culhane's "Written Test Book" have been a great help and I didn't find any questions in the T.C. exam that were not addressed in principle in those test exams.

The actual T.C. exam seemed to be easier than the test exams because questions didn't seem to be so much "in depth" and calculation were kept fairly simple and straightforward.

(If someone likes to borrow my Culhane, please let me know - Peter Schlieck. 594-8450)

Mark 23/1/96

## Commercial test

1. If endorsed with a class and category, what does that mean.
2. What is dist from cloud in controlled airspace VFR.
3. blinking runway lights.
4. single engine aircraft - what's required beyond gliding distance from shore.
5. when at or below 12500 - transponder set at over Saskatoon - what mode A or C.
6. Class B airspace is what.
7. Why does airplane stall in a turn at higher airspeed (load factor).
8. What happens to center of pressure after the wing stalls.
9. When aircraft is loaded tail heavy, what axis of stability does it affect.
10. pitot tube blocked - what happens.
11. what do gyroscopic instruments exhibit? *rigidly in the*
12. what 3 air masses are in north america.
13. what causes wheelbarrowing.
14. What is the amount of water content in the air?

- sun question -

- W + B

-  $1/60$

- DISTANCE TO STATION.

- TIME TO STATION

- FLIGHT PLANNING 4/E (MORE THAN WAC)

- ONE LF FSS frequency

- MEA or

- Commercial Ops. - none

- heading -- track NDB relative bearing

- Weather - area forecast.

Medical - effects -

- ① - question was something like "what could a CPL holder fly with" whatever category, type & class, you want to give him in the example.
- ② what should a pilot do while taxiing his a/c when he notices blinking runway lights.
- ③ know these regs. ( $O_2$  @ elevation).
- ②⑦  
②⑧ There was a bit about pressure altitudes. Student had to apply this knowledge in other questions in NAV section.
- ③④ Understand how W/S is connected to thunderstorms & inversions
- ③⑥ FA are good for \_\_\_\_\_ hours?
- ③⑧ question was "what ceilings can be expected"; "what vis. can be expected" in a sample FA. Here they referred to IFR, MVFR & VFR limits.

MET: Be sure to understand FAs, Metars & Tafs: Exam asks questions on interpreting these. Need NOT bother with SFC charts or upper level maps, on exam I was given.



- Know that FAs forecast ceilings ASL,  
Meters & Tops AGL. & winds in °T.  
Be careful - times.
- On FD's know how to interpolate.  
IE: know winds, & temps @ 7000'  
when forecast gives only 6 & 9000'.

### NAV.

- Only question on my exam from the CFS was when SAR was available @ an airport given. It wouldn't hurt to have a good understanding of CFS although my question was easy to figure from abbreviations & times given.
- Almost a MUST to have an electronic flight computer. It's faster & more accurate than whiz wheel & I'm not sure the wheel could answer all questions.
- Exam has you calculate ETE's, distances, fuel consumptions (know VFR reserves).

- How to find out how far away a VOR  
(68) is reliable? IE:  $\sqrt{\text{altitude}} \times 1.23$ .

- One question asked about Suro Tree Brg.

- ~~How~~ If mixture isn't adjusted @ altitude,  
(77) know that less air (by weight?) is  
available for same AMOUNT of fuel.

- In Air regs: one question was distance  
from shore you can fly (multi engine)  
when able to maintain flight if  
critical engine fails.

- One question on PAPI lights (slightly low)  
what lights are on red, white?

- Need to know X-wind limitations (IE 20% of  $V_{SO}$ ) & how to apply this knowledge to a situation given.
- Know drift angles: Question was something like — "after 20 min. you notice you are  $10^\circ$  S. of your track. What heading do you fly to regain track, for how long, & what heading do you fly from then on?"

### Nav Aids:

- Need thorough understanding of VOR-NDB. Questions are "tricky." MH & RB are sometimes given, but the BTS & BFS are sometimes given, OR they will just give the NDB or VOR station which must be located on the map, then the BTS or BFS taken from it.
- If you tune a VOR & get the needle (CDI) responding (appropriately?) but with no audible ident, what does that mean?

- understand how to calculate C of G.

On my exam they used a W & B chart similar to that on pg. 16 ~~of the book~~.

There were 2 questions: compute C of G, then re compute after adding more baggage & burning off some fuel. Be careful.

And is new C of G within limits?

There were no questions &  $\frac{wt}{WT} = \frac{d}{D}$

## #2 EXAM

- (13) The exam asked about setting altimeter  
(14) in S.P.Z. after taking off, not prior to landing, or descending. Again, they twist around the situation to test your depth of knowledge.

Met.

- airmasses that affect N.A. wx.
- What can a pilot expect to see when 50 mi ahead of a cold front, a line squall is forecast?

Nav.

- Know the formula for finding time from  
(60) a VOR or NDB by flying  $90^\circ$  to the  
(61) radial -  $\frac{\text{crossed}}{\text{Time in seconds}}$ . then  
 $TAS \times 60$  ? for distance. (whatever)
- Night effect on NDB reception. Worse @ elevation, altitude, over water ??

Gen Knowledge.

- Understand what happens to ~~press~~ C/P in a stall. Does it move forward, back, stay still?
- Normal takeoff chart on PG 168 & used on my exam.

### # 3 EXAM

MET:

- One question on PIREP
- On one METAR, question was asked "what will happen if temp. drops?"  
example given had temp 7, DP-6.  
and it was raining.
- On the exam there was no interpretation of the synopsis involved, only reading the FAs, TAFs & metars.

GEN: (actual question)

- What happens if you burn high octane fuel in high compression engine?
- What happens to MP with carb ice?
- What happens to stall speed as weight increases? Stall angle?

## #4 EXAM

- AIR LAW - Question: Who is "Responsible person" on flight note.

- Someone who reports arrival?  
" " " non arrival?

- Right of way - Know a/c on (R) has ROW.

WX

(33) Question - what can a pilot expect ahead when he is into ice pellets & snow?

Gen:

question: what is most dangerous in wing tip vortices? (Roll?)

- what happens to ASI when pitot tube blocked?

- Flying @ 11,500' what is transponder code?

- Understand how to use cruise power setting chart on PG 170.

Dave, Could I get this exam bank back by about mid January?

Thanks

Barry.

# NAVIGATION

ALBERTA  
MAP

- Definition: agonic line
- Difference between Mercator & Lambert Conformal Conic maps.
- Double track correction method
- "DR" Dead Reckoning definition
- Triangle of velocities
- Compass errors - Magnetic Dip
- Calculating DA
- Time / Speed / Distance
- Distance / Ground Speed / Time
- NOTAM
- Weight & Balance

\* No Chart just table

front seat weights for  
pilot & passenger EXCEED

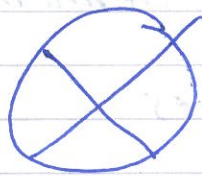
Maximum weight. How to  
determine c of g?



- Obtaining fix through VOR

- Calculating wind direction & speed based on ground speed & heading.

- Canada Flight Supplement.



altitude for descent  
& ~~ground~~ ~~obstacle~~  
clearance.

- Limitations of ADF @ night & early morning.

- Intercepting radials @  $30^\circ$

# Commercial Pilot Intell

20000309.

## AIR LAW

### - Part III - Aerodromes

- minimum lighting
  - reflectors only.

### Part IV - Personnel Licensing & Training

- Flight plans vs ~~it~~ itineraries to U.S. destinations
- commercial Pilot Licence - aeroplane - privileges

### Part VI - General Operations.

- Fitness of flight crew - fatigue.
  - who's responsibility
- Re-booking
- Aircraft Icing
  - critical structures.
- Altitudes.
  - \* IF PA is  $> 3000$  how do you fly VFR?
- Right of way with IFR plane flying VFR & VFR plane. Who has right of way?
- What does ATC give VFR pilots in Class C airspace?
- Altimeter setting ~~in~~ from level flight in S.P.R. to land in A.P.R.
- FLASHING GREEN LIGHT MEANING
  - in air
  - on ground.
- Life preservers & rafts & multi-engine airplane capable of maintaining level flight.

- X-WIND LIMITATIONS USING ~~20% of V<sub>SO</sub>~~

20% of V<sub>SO</sub>  
- Overdue aircraft on flight itinerary, when must pilot report?

- What information is included on initial call to ATC from air plane?

- What is Special VFR flight minimum?

- What is VFR visibility minimum in CLASS G over 1000'?

- AIR TAXI operation single engine @ night. minimum criteria, e.g. turbine engine aircraft, et-al.

- Use of oxygen.  
when must all crew wear oxygen?

- Air Operator training of flight crew on de-icing

- WAKE turbulence - large aircraft in what configuration.

- ~~ARCAC~~ ARCAC LIGHTING, if lights are on already upon approach, do you activate the lights by your radios.

\* Chart interpretation

- take distance.

- fuel burn rate & amounts used to destination.

\* remember to include your legal day or night minimums. 30 min 45 min

# MET

- FA
- WARM FRONT IN WINTER DIAGRAM?
- MANY weather symbols
- \* KNOW YOUR SYMBOLS
- HIGH to cold travel \*

# Met Con't


ATO might use single engine.  
fitness of crew member - fatigue

## General Knowledge.

- Long slow turn to left, quick turn of head to right. Pilot will feel what sensation?
- EFFECTS of Wind Shear?
- EFFECTS of ICE on stall speed of flight.
- Ground effect & induced drag.
- Bank Speed vs Rate & Radius of turn.

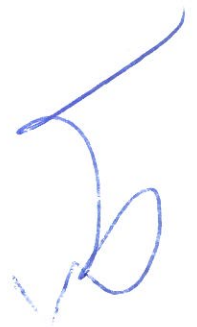
Test Question Examples

DAVE PARRY.

- 1 Double track method with wind correction angle.
- 2 NOTAM - when is it no longer valid?
- 3 C.S.F. - Radius circle/group correct statements.
- 4 ADF - Using VOR airways as BTS and using runways as BTS, finding RB. ~~radio~~
- 5 VOR - Set OBS to what heading when tracking ~~radio~~ radial plus - 45° intercept
- 6 OBS moves to the left while tracking, what direction and wind correction is needed?
- 7 Sun's true bearing chart.
- 8 Weather radar is primary or secondary?
- 9 Loran - what does not affect performance?
- 10 RMI - capable of what?
- 11 VTA symbols for VOR, DME, military and civil. 
- 12 DME is least accurate when?
- 13 Transponder receives altitude information from where?
- 14 LO and WAC, GS, ETA, Distance and fuel consumption.
- 15 Climb fpm.
- 16 On an airway, using another station's VOR to locate position prior to reaching radial, the OBS would read?
- 17 Dead reckoning is? (PR 15)
- 18 FSS heavy box with frequency given, which other frequency can you use?
- 19 A straight line drawn on a WAC chart is?
- 20 Which charts are Lambert Conformal Conic, WAC, VTA, Artic projection, all of the above.
- 21 Triangles of velocities are? (grouping question)
- 22 Cruising altitudes.
- 23 Pilot licensing requirements.
- 24 Flight times limitations in 365 days.
- 25 Aircraft icing - legal to fly or not?
- 26 Air taxi w/passengers 50 nautical miles over water - what survival equipment is necessary?
- 27 When must an ELT be carried on board?
- 28 SALR and DALR question.
- 29 Formation of clouds, formation of fog.
- 30 Cold front development.

QUES.  
I HAD ON  
MY EXAM

ANY QUES.  
CALL  
525-6936  
AUSTEN



- 31 Warm front in winter time, what is expected?
- 32 FA's, FD's, metars - decode.
- 33 Prognostic surface charts.
- 34 Carburetor icing is caused by? At what temperature?
- 35 Fuel injection icing - is there an alternate air source?
- 36 Moving of the *C of G*.
- 37 *C of G* - how does it affect performance?
- 38 Variable pitch propellers, loss of oil.
- 39 PITOT blockage will affect ASI - in what way?
- 40 How will ASI operate in freezing temperatures?
- 41 Turn bank indicator in a corner, slipping or skidding.
- 42 Windshear - how will it affect ground speed?
- 43 Performance speeds - VLO.
- 44 Take off chart, cross wind chart.
- 45 Weight and balance, *C of G* limits, moment and locating *C of G*.
- 46 Affects of icing on a plane during take off or climb.
- 47 Orientation in a white out.

1. What danger should the pilot be aware of after thawing a snow covered airplane in a hanger and then pushing it back outside in below zero temperatures?
  - a. Carb ice on start up.
  - b. Freezing of pools of remaining liquid
  - c. Ice forming on upper control surfaces
  - d. ?
  
2. A pilot flying VFR unless otherwise instructed by ATC should always squawk 1200 below \_\_\_\_\_ and squawk \_\_\_\_\_ above.
  - a. 10,000ASL, 1300
  - b. 12,500ASL, 1300
  - c. 10,000ASL, 1400
  - d. 12,500ASL, 1400
  
2. If you are flying towards a warm front and you experience light ice pellets with snow
  - a. heavy snow showers ahead
  - b. rain immediately ahead
  - c. hail immediately ahead
  - d. ?
  
3. When approaching a stall, the center of pressure moves?
  
5. Cruising altitudes for VFR flight begin at
  - a. 3000AGL, and are based on magnetic track
  - b. 3000ASL, and are based on magnetic track
  - c. 3000AGL, and are based on true track
  - d. 3000ASL, and are based on true track
  
4. After the passing of a cold front, winds will generally
  - a. back and flying conditions become smooth
  - b. veer and flying conditions become smooth
  - c. back and flying conditions become bumpy
  - d. veer and flying conditions become bumpy
  
5. What are the required instruments for VFR OTT
6. What frequency would you select if you are flying in VMC into an airport with no air-ground frequency?
7. What are the limits for entering an ADIZ (time and distance)?
8. When flying in light rain or drizzle a pilot should be aware of the risk of?
9. An aircraft involved in an incident may only be moved without the permission of the transportation minister
  - a. to save log books from burning
  - b. to remove injured persons
  - c. to prevent damage to any persons or property
  - d. ?
  
10. To fly a single engine, Day VFR, a commercial pilot with the same type endorsed on his license requires what?
  - a. A pilot proficiency check
  - b. A competency check
  - c. ?
  - d. ?
  
11. Class B airspace is normally:
  - a. all air space from 12,500-18,000



- b. all low level airspace from 12,500 up to but not including 18,000
12. How long should a pilot wait before flying after extensive dental work involving anesthetics?
- 24hours
  - 12hours
  - ?
13. Alcohol has such a lasting effect b/c
- it stays in the bloodstream
  - it stays in the middle ear
  - it stays in the inner ear
  - it stays in brain tissue
14. When is a landing light required?
15. An aircraft taking off or landing on the surface of the water requires
- Personal flotation devices for all on board
  - A life raft suitable for all on board
  - A submersible ELT or survival ELT
  - ?
16. How is an intermediate stop filed in a flight plan?
17. You are clear of the frequency in a MF zone when
- You are established enroute
  - You are clear of the traffic circuit
  - You are well clear of the area
  - You are established in a climb?
18. Detection of Carb ice on an air craft with a constant speed propeller after application of carb heat would be noticed by:
- Reduction in MP
  - Increase in MP
  - Sudden drop in MP
  - Sudden drop in MP followed by a gradual increase in MP
19. Considering the requirements for the use of safety belts which is true?
- All passengers must use safety belts at all times during flight
  - All passengers must use safety belts for take off and landing.
  - Small children must be in a restraint system for the whole flight
  - At least one pilot sitting in a pilot seat must be wearing a seatbelt for the duration of the flight
20. The transponder gets its altitude information from:
- A radar altimeter
  - Pressure sensitive altimeter
  - ?
21. Maximum flight duty time in a commercial air service is?
22. A straight line drawn on a VNC map:
- Intersects lines of latitude at right angles
  - Represents a rhumb line
  - Represents a great circle
23. On a pressurized flight, disconnection of the static line in the cabin would
- altimeter and airspeed read high
  - altimeter read high and airspeed low
  - altimeter and airspeed read low
  - altimeter read low and airspeed read high
24. The first symptom of carbon monoxide poisoning is?

- Sun's true bearing

Ken Nov/95

COMMERCIAL PILOT EXAM QUESTIONS

---

1) WHAT IS RMI IS RECEIVED ON ?

- A) ADF VOR
- B) DME VOR
- C) VORTAC ADF

2) LORAN C IS NOT ADVERSELY EFFECTED BY ?

- A) POWER LINES
- B) RADIO SIGNALS
- C) PRECIPITATION AND TERRAIN
- D) CURVATURE OF THE EARTH

3) COUNTER WEIGHT PROPELLER WILL ----- WITH LOSS OF OIL PRESSURE ?

- A) GO TO FULL FINE
- B) GO TO COARSE PITCH THEN FEATHER

4) IF THE PITOT SYSTEM IS BLOCKED, WHAT WILL THE ASI INDICATE ?

- A) OVER READ IN CLIMB UNDER READ IN A DESCENT

5) WHAT DOES MODE C TRANSPONDER USE ?

- A) PRESSURE SENSITIVE ALTIMETER
- B) ENCODING ALTIMETER
- C) ALTIMETER

6) WHAT IS THE BASIC OPERATION OF A GYROSCOPE / HEADING INDICATOR BASED ON?

- A) PRECESSION
- B) INERTIA
- C) RIGIDITY

7) UPDRAFT TURBULENCE AFFECTS THE AIRFRAME BY ?

- INCREASING STALL SPEED
- DECREASING STALL SPEED

8) WHITEOUT IS MOST PREVALENT WHEN ?

- A) SNOWING
- B) SNOW COVERED GROUND AND LOW CLOUD COVER

9) NOTAM EXAMPLE WAS GIVEN, TWO WERE THE SAME BUT HAD DIFFERENT END DATES. WHEN WAS NOTAM CANCELLED? *app*

- A) SPECIAL NOTAM ISSUED
- B) AUTOMATICALLY

10) CARB ICE IS MOST PREVALENT IN NON FUEL INJECTED AIRCRAFT BECAUSE ?

- A) ICE FORMS IN CARBURETOR THROAT
- B) THROTTLE VALVE IS CLOSE TO FRONT OF CARBURETOR ✓

11) USE OF LOWER OCTANE FUEL WILL CAUSE ?

- A) INCREASE HORSEPOWER
- B) DETONATION ✓
- C) PRE IGNITION

12) WHY ARE COUNTER BALANCES USED ON FLIGHT CONTROLS ? ✓

13) A STRAIGHT LINE DRAWN ON A MAP MOST REPRESENTS A? ✓

14) WHY DOES THE STALL SPEED INCREASE IN A TURN ? *not a load factor*

15) WHAT TWO FACTORS ARE NEEDED TO FIND THE TRIANGLE OF VELOCITIES ? *GS & wind*

16) WEIGHT AND BALANCE QUESTION.

- ✓ WEIGHTS WERE GIVEN. FIND ARM IN CHARTS AND MULTIPLY MOMENTS X 100.
- ✓ FIND AIRCRAFT C OF G ?
- ✓ THEN FLY 2.4 HRS BURNING 12.4 GPH PLUS 15 GPH FOR 20 MIN CLIMB.
- ✓ PICK UP 1 PAS 140 LBS IN BACK SEAT. IS AIRCRAFT OVER WEIGHT?
- ✓ IS AIRCRAFT WITHIN C OF G ? (SEE CHART)

17) WING SLOTS ON AIRCRAFT ARE FOR ?

18) AFTER OIL DILUTION IS PERFORMED, AIR CRAFT MUST BE PROPERLY WARMED UP TO PREVENT ?

19) AS AN AIRCRAFT CLIMBS, IF FUEL MIXTURE IS NOT ADJUSTED. WHAT WILL HAPPEN?

- A) FUEL VOLUME TO AIR VOLUME INCREASE
- B) FUEL WEIGHT TO AIR WEIGHT WILL INCREASE

20) WING TIP VORTICES WILL MOST LIKELY BE PREVALENT ?

- A) SLIGHT CROSS WIND LEAVING DOWNWIND VORTICES ON RUNWAY
- B) SLIGHT CROSS WIND LEAVING UPWIND VORTICES ON RUNWAY

21) WITH WIND SHEAR, YOU WILL MOST ALWAYS ENCOUNTER ? ✓

- A) DECREASE IN GROUND SPEED THEN INCREASE IN GROUND SPEED

22) IF AN AIRCRAFT IS LOADED AFT HEAVY, WHAT IS AFFECTED ?

- A) LATERAL STABILITY
- B) VERTICAL STABILITY
- C) LONGITUDINAL STABILITY

Projection - Lambert - This person - his theory of projection was used to create

Lighting - ask to look on ASCS → 3 or for.

- VASIS elevation
- highest obstacle
- cruise height

- 9 on 4 environment
- spiral sand
- LE RW length

COMMERCIAL

head  
Airplane tracking  $345^\circ$  to intercept track  
018 from North Bedford to LaGrange.  
What will be your relative bearing upon intercept.

Having intercept direct to an NDB & your you have  
a 10 drift to the right, what will be indicated on a fuel  
card

- a) 350
- b) 360
- c) 010

Q. with reference to metar "VV003" indicates? (Fog associated)

Q. A2999 represents.?

- 29.99 "Hg, 29.99 hPa, . . .

Q. FA question - time terminates, wind question, Freeze level question, ~~North Bay to Ottawa~~ Ottawa to Toronto via waypoint does; cloud thicken and lower, wind increase, . . .

Q. FD question Ottawa to North Bay at 6500 Ft at 280° TT. what do winds do?

Q. ~~se~~ Facilities available at Belleville

- customs, PPR, runway lighting (radio controlled), circuits,

Q. For NOTAM at Belleville, is runway open

Q. coordinates Apsley, Ont.

Q. on track abeam Perth, what radial are you on to the Ottawa VORTAC - ~~do you set~~ what bearing and flag do you set for direct to VORTAC

Q. what is greatest MEF (max elevation figure) STANHOPE TO BELLEVILLE

Q. Abeam Perth on track to Ottawa (MacDonald/Cartier) what airspace are you in.

Q. On track STANHOPE TO BELLEVILLE, 15 mi from ~~to~~ Belleville, whom do you call on radio.

\* special note: Flight log form given for test, however, instructions indicate no log form required.

Q. At very odd temperatures altimeter reads?  
- low, high, ....

Q. true altitude versus ~~indicated~~ <sup>calibrated</sup> altitude question.

Q. compute groundspeed and MA to fly STANHOPE TO BELLEVILLE.

Q. one inch on the VNC (1:500 000) represents how many nautical miles?

Q. when taxiing with strong wind at your 10 o'clock - what is correct control position?

Q. why shouldn't carb heat be used when taxiing?

Q. Under what conditions can we expect icing conditions?

Q. question regarding ground effect.

NAVIGATION:

FLIGHT FROM "STANHOPE" TO "BELLEVILLE" TO "OTTAWA INTL." AS IF ANYONE WOULD WANT TO FLY THERE!

- 1) - ARRIVAL OF "NALIBURTON" @ "TIME", ARRIVAL OF "APSLOY" @ "TIME" - WHAT IS ETA?
- 2) - FLIGHT SUPP. QUEST. ON "BELLEVILLE" AIRPORT: WHAT LIGHTING, CUSTOMS, L/H OR R/H CIRCUITS, ETC.  
(CHOOSE ALL CORRECT STATEMENTS FROM LIST.)
- 3) - FLYING OVER PEATH @ \_\_\_\_\_ ft. WHAT AIRSPACE ARE YOU IN?  
(B, C, D, E)
- 4) - FROM PEATH TO OTTAWA VOR, WHAT RADIAL DO YOU DIAL IN?
- 5) - GIVEN (G.S) (1:40) G.P.H., FLIGHT TIME, 2 GALS. FOR TAXI & CLIMB @ STANHOPE, 2 GALS. FOR TAXI & CLIMB @ BELLEVILLE, WHAT IS MIN. FUEL REQUIS. FOR DAY VFR.  
(DON'T FORGET 30 MINUTE RESERVE).
- 6) - IF YOU FLY ~~AT~~ A HEADING OF 062(?) FOR A TRACK OF 051(?) WHAT IS THE RECIPROCAL HEADING TO FLY ON RETURN?
- 7) - WHAT IS COMPOSITION OR TRIANGLE OF VELOCITIES FOR WIND & ~~DRIFTS~~ DRIFTS PROBLEMS COMPOSED OF?  
(VARIOUS PAIRS OF INFO → CORRECT SELECTION IS: (HEADING, TAS), (WIND & WIND SPEED), (TRACK & GROUND SPEED))
- 8) - 15 NM NW OF BELLEVILLE, WHOM DO YOU CONTACT FIRST?  
(5500 FT AGL.)  
(VARIOUS TWR & UNICOM & FSS FREQUENCIES FOR ANSWER)  
- (I SAID TRENTON TWR AS YOUR ABOUT TO ENTER THEIR CZ)
- 9) - AFTER CONTACTING BELLEVILLE, WHAT IS THE CORRECT ENTRY TO THE TRAFFIC PATTERN? FOLLOWS & NOT ~~OTHER~~ OBVIOUS CHOICES LIKE RIGHT HAND DOWNWIND & STRAIGHT IN ON BASE LEG, ETC. (NO L/H DOWNWIND CHOICE).  
& DETERMINE THAT RUNWAY — IS THE ACTIVE RUNWAY,
- 10) - DOUBLE TRACK QUESTION: HOW LONG & AT WHAT HEADING DO YOU FLY TO GET BACK ON COURSE & WHAT WILL NEW HEADING BE AFTER YOU ARE ON COURSE?



(NAVIGATION CONC)

- 11) MH QUES: GIVEN WIND, TAS  $\neq$  TRACK, WHAT <sup>MAG.</sup>  $\Delta$  HEADING  $\neq$  G.S. WILL RESULT, (DON'T FORGET TO ADD MAGNETIC VARIATION!).
- 12) WHAT IS MAX. MEF ENCOUNTERED FOR TRIP TO STANHOPE TO DULLEWICK. TO OTTAWA.
- 13) WHAT DOES "LAPSE RATE" REFER TO:  
✓ 1) TEMP.  
2) PRESSURE  
3)  
4)
- 14) WHICH OF THE FOLLOWING IS THE MOST LIKELY <sup>THE</sup> CAUSE OF GROUND EFFECT:  
1) LACK OF CUSHIONING EFFECT ON HIGH WING AIRCRAFT.  
2) AIRCRAFT TAKES OFF BUT SLOWLY SETTLES BACK ONTO THE RUNWAY.  
✓ 3) AIRCRAFT TAKES OFF BUT IS UNABLE TO CLIMB.

## METEOROLOGY:

HAD EXAMPLE OF FA, TAF, METARS & WINDS ALOFT.

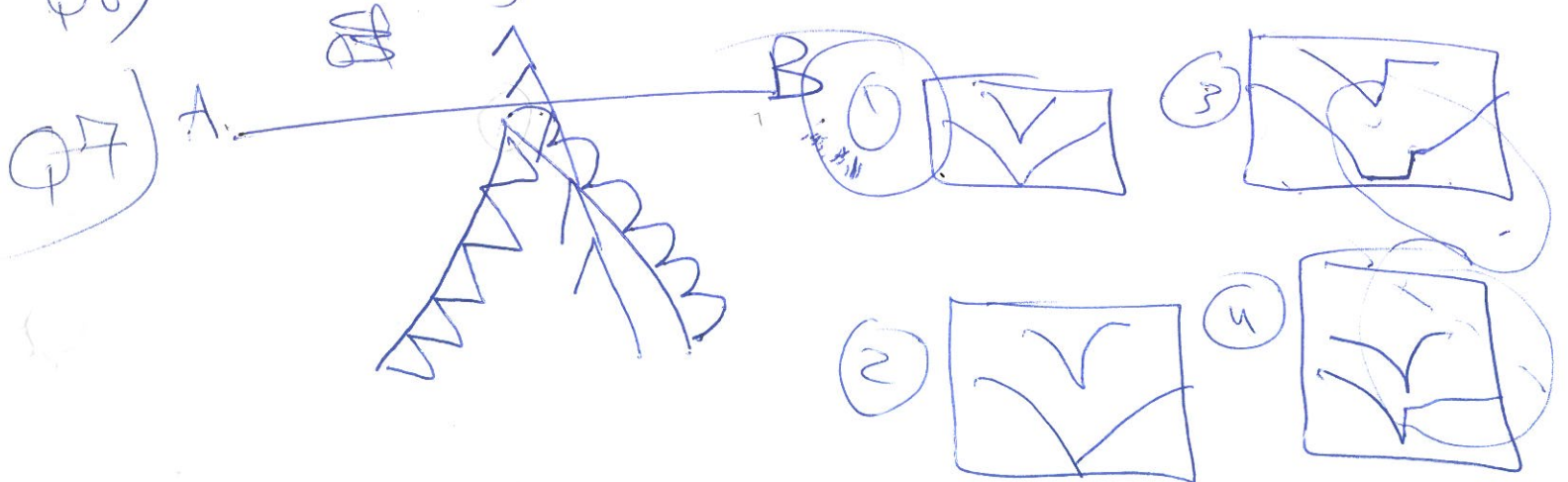
- 1) - TYPES OF WEATHER CONDITIONS TO EXPECT WHEN FLYING THROUGH 3 AIRPORTS BASED ON METAR.
- 2) - TYPE OF WEATHER TO EXPECT WHEN FLYING THROUGH REGION BASED ON FA.
- 3) - FLIGHT FROM " " TO " " TO OTTAWA. BASED ON WINDS ALOFT THE HEAD WIND WILL:  $\odot$  ~~6500~~<sup>6500</sup> FT (WINDS GIVEN FOR 6000, 9000 FT)
  - 1) - DECREASE .....
  - 2) - INCREASE .....
  - 3) - STAY SAME. ROUGHLY THE
  - 4) -

THIS WAS TRICKY AS WIND WENT FROM 280 @ 29  
TO 280 @ 24  
TO 240 @ 27  
(MY CHOICE. BUT WASN'T SUAG.)  
(NW COMPONENT DROPS BY 2 KTS.)
- 4) - CHARACTERISTICS OF SQUALL LINE:  
.TS., RAIN, GSC., SHIFT IN SURFACE WINDS.
- 5) - REFRIGERING BOUNDARY OF COLD AIR MASS IS CALLED:
  - 1) WARM FRONT
  - 2) COLD FRONT
  - 3) OCCULDED FRONT
  - 4) QUASI-STATIONARY FRONT.
- 6) - BASED ON TAF ARE VFR CONDITIONS FORECAST FOR FLIGHTS FROM " " TO " "  
AT (TIME) XXXX Z?
- 7) - FREEZING LEVEL BASED ON FA?
- 8) - BASED ON FA, THE <sup>RIDGE</sup> ~~FRONT~~ OVER " " IS:
  - 1) MOVING
  - 2) BUILDING
  - 3) NOT MOVING  $\leftarrow$  (CORRECT.)
  - 4) DECREASING.
- 9) - FOR THUNDERSTORMS TO DEVELOP YOU REQUIRE:  
(4 CHOICES WITH VARIOUS CONDITIONS).

## AGRONAUTICS / GENERAL KNOWLEDGE

- 1) - WHICH OF THE FOLLOWING ARE CONSIDERED "CRITICAL SURFACES"?
- PROP.
  - LANDING GEAR
  - ELEVATORS
  - OTHER STABILIZING SURFACES.
- 2) - ~~IMPACT ICES AFFECTS:~~
- FUEL INJECTION ENGINES ARE SUBJECT TO:
- IMPACT ICE.
  - THROTTLE ICE
  - ETC.
- 3) - FLAPS: INCREASE/DECREASE LIFT & INCREASE/DECREASE DRAG.
- 4) - WHAT IS MOST PROBABLE CAUSE OF ENGINE OIL TEMP. 500 FHT?
- 1) TOO MUCH OIL.
  - 2) TOO LITTLE OIL.
  - 3) OIL OF TOO HIGH VISCOSITY.
  - 4) ? STUPID ANSWER.
- 5) - COMPASS ERROR IN STEADY CLIMB?
- 6) - 25 KTS WIND @ 10 O'CLOCK POSITION. WHAT IS CORRECT AIRBRON & ~~ELEVATOR~~ ELEVATOR CONTROL POSITIONS.  
(ie L/R AIRBRONS UP/DOWN & ELEVATOR UP/DOWN/NEUTRAL)
- 7) - TOO HIGH AN OCTANE FUEL WILL RESULT IN:
- 1) ~~DETONATION~~ FOULLED PLUGS
  - 2) ~~FOUL~~ DETONATION
  - 3) TOO LEAN A MIXTURE
  - 4) TOO RICH A MIXTURE.
- 8) - INDICATED STALL SPEED IN TURN.
- 1, 2, 3) INCREASE/DECREASE FOR CLIMBING TURN & INCREASE/DECREASE IN GLIDING TURN
  - 4) INCREASE IN ANY TURN.

- Q1) Relation between density altitude and approach speed and landing distance
- Q2) How to protect w/ engine?
- Q3) what affects coefficient of lift
- Q4) difference turn and bank coordinator + turn coordination
- Q5) mixture settings
- Q6) static pressure line ~~the difference~~ disconnected what happens between ~~pressures~~ ASI / ALT  $\rightarrow$  inside the air
- Q7) ~~is~~ alcohol or drug use 2 hrs is not correct 4 hrs
- Q8) what happens to the wind in water over 30° lens (back)
- Q9) Heading indicator ~~characteristics~~



[www.tc.gc.ca/civilaviation/general/exams/menu.htm](http://www.tc.gc.ca/civilaviation/general/exams/menu.htm)

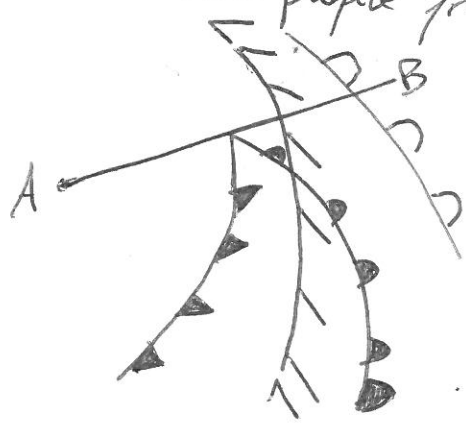
5802 - 508711

Examination questions which are related to the following were answered incorrectly.

- Calculate weight and balance.
- Choose the most useful weather information when planning a cross-country flight.
- Decode a TAF.
- Define terms used to describe sky conditions.
- Define warm front.
- Explain the effect of wind on gliding distance.
- Explain the effect of wing flaps.
- Explain the factors that affect the angle of attack at which an airfoil stalls.
- Explain the relationship between TAS and IAS.
- Explain the relationship between trim control position and trim tab position.
- Extract aeronautical information from navigation charts.
- Interpret and track GPS.
- Interpret the CFS.
- Interpret VFR Navigation Chart symbols and information.
- Recall illusions created by various runway sizes.
- Recall the difference between altimeter setting and MSL pressure.
- Recall the regulatory requirements for a recurrent training program.
- Recall the regulatory requirements for elementary maintenance.
- Recall the requirements to carry passengers at night.
- Recall the symptoms of a spin.
- Recall the trans-border requirements for flight plans.
- Recall when to use a VTA.
- Recognize the conditions conducive to caburettor icing.
- Recognize the effects and hazards of a malfunctioning ignition switch.
- State the regulation regarding the dropping of objects from aircraft in flight.

- How to set your altimeter when the ambient pressure is greater than 31 mmHg?
- How does the mode C transponder work?
- Know the different mixture settings. What are they? Lean/Rich best power, etc
- How does the wind behave over water compared to over land? Strength/direction
- Aircraft icing regulations. Know them.
- Infant & child restraints systems regulations.
- Training requirements in commercial air services.
- Recognize jet stream speed & turbulence. Isotachs, etc.
- State the relationship between temperature and moisture content.  
Ex: If the  $T_0$  decreases, how does the dewpoint behave?

- What is the profile from A to B?



ex: Cold front:

Warm front:

etc...

- The airplane is on the ground. The TC indicates as below. What is happening?



Examine Right Rudder

CPL June 04

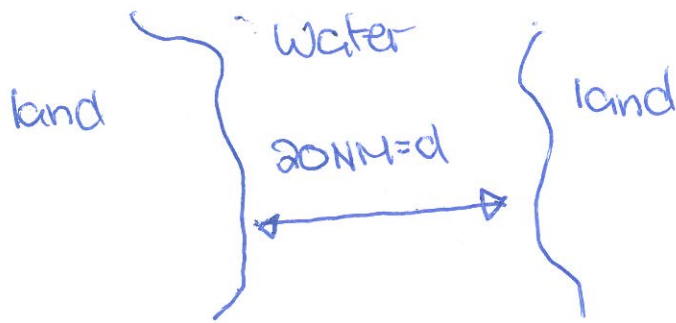
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Examination questions which are related to the following were answered incorrectly.

- Apply right-of-way rules.
- Calculate ground speed.
- Calculate relative bearing.
- Choose useable radio frequencies.
- Decode a NOTAM.
- Decode a TAF.
- Describe the change in wind from the surface to clear of the boundary layer.
- Describe the characteristics of HF radio.
- Describe the information available from a VORTAC station.
- Describe the movement of air in pressure systems.
- Describe the weather associated with an upper front.
- Determine true track using navigation charts.
- Estimate flight time.
- Explain the advantages and disadvantages of fuel injection.
- Explain the effect of a vertical gust on stall speed.
- Explain the effects of frozen contaminants on lift and drag.
- Explain the effects of topography on wind.
- Explain the hazards associated with virga.
- Explain the hazards of wind shear.
- Explain what happens to the C of P during a stall.
- Explain why fuel/air mixture adjustments are necessary.
- Explain why TAS and IAS differ.
- Identify class of airspace.
- Identify cloud forming processes.
- Identify possible causes of high engine oil temperature.
- Identify the cause of low level wind shear near thunderstorms.
- Interpret a GFA.
- Predict the reliability of a magnetic compass during a climb.
- Recall the regulatory requirements for starting and ground running of aircraft engines.
- Recall the requirements to carry dangerous goods.
- Recall the restrictions regarding alcohol or drug use.
- Recall the rules that apply to a Class C control zone.
- Recall the rules that apply to the Class F airspace.
- State the rule regarding dropping objects from aircraft in flight.

- Hyperventilation → Symptoms: dizziness, tingling of toes & fingers, hot and cold sensation, nausea and sleepiness.
- Determine minimum altitude over water when given rate of descend. ex. 1000' lost per 2NM distance gain horizontally



\* use only half of 20NM in your calculation

\* Don't forget to add (ASL) of given area if the options are in (ASL)

- Control inputs for headwind and tailwind during taxi.
- Determine which runway to use under no winds, consult (CFS)

- Carbon monoxide poisoning → how to tell / how long it lasts
- Virga → associated w/ what
- Squalls → associated w/ cold front (fast or slow moving)
- visual cue of squall line
- Flaps on final → how effects angle / lift / drag
- Flying into warm front from cold front side → expect what?
- Cirrus clouds → no precipitation
- skidding turn / slipping turn.