1.	Describe the general systems of this aircraft:								
	a.	Aircraft structure –							
		i. What is the structural temperature limit? °C							
		ii. Where can these 'limits' be observed?							
	b.	Engine –							
	c.	Fuel – Capacity?gal, No of Tanks & location?Usable?	ga						
		i. Position & location of fuel drains to sump							
		ii. Type of fuel permitted?							
		iii. Fuel flow indication							
	d	Oil Type (all weather)? Sump Canacity? ats							
		Oil Type (all weather)? Sump Capacity? qts  Electrical system is a v system and supplied by a v battery							
	f.								
	g.	PropellerHeating/ventilation –							
	_	How are the flaps operated?							
	i.	What are some electrical accessories in this aircraft?							
	i.	Landing Gear –							
	k.	Brakes -							
2.	What i	is the manufacturer recommendation for leaning the mixture?							
3.	What i	is the ramp weight for this aircraft?lbs.							
4.	What i	is the maximum take-off and landing weight for this aircraft is lbs							
5.	Currer	nt basic empty weight and arm for this aircraft is? lbs., inches							
6.	What i	is the Useful Load of this aircraft? lbs							
7.	How n	nuch payload can be carried assuming maximum fuel on board? lbs.							
8.	What i	is the maximum weight permitted in the baggage compartment in normal category?	_lbs						
9.	The pr	roper main tire pressure is psi, and for the nose wheel it is psi							
10.	Upon	a "Generator Failure" condition, what actions should the pilot take?							
	a.								
	b.								
	d.								
11.	When	should the electric fuel pump be used?							
	a.	What is the worst-case fuel burn you can expect at a pressure altitude of 2000ft?	gph						
		and under what conditions would this occur?							

conditions?  12. What actions should be taken if "Loss of Fuel Flow/Pressure" occurs?  a. b.  13. Starter cranking is limited to seconds with minute rest periods between cranking cy.  14. What is the "COLD START" procedure?  15. What causes engine flooding?  16. What is the procedure for starting the aircraft if the engine is FLOODED?  17. How do you "HOT START" this aircraft?  18. What is the manufacturer's recommendation for "warming up" the engine oil if cold?  19. Is it permissible to fly this aircraft into forecast/known icing conditions?  20. What are the following speeds for this aircraft?    V-speed   KIAS   V-Speed   KIAS   V-Speed   KIAS   V-Speed	cond	litions?									
a	12 What action	s should he take	en if "Loss of Fue	el Flow/Pre	essure" occurs?						
b											
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What are the first four steps in the emergency procedure for an in-flight (electrical) engine fire?	V-speed VR VGLIDE VNO VSO VFE (T/O) VFE (LDG)  What is the maximal what type of stall the widness this aim what are the flap During a Short-on How can you determine where is the ELT	mum demonstrat I warning indicati craft prevent inact settings of this at r Soft-Field takeo ermine if the war	V-Speed VX VY VNE VLO VA VCRUISE CLIMB  Ted X-wind for this on does this aircredvertent leaning of the control	s aircraft? _ aft have? _ of the fuel n d be lowere panel are f	KTS  nixture?  d to the position unctional?						

30. When should alternate air be used?

31. What is the approximate ground roll distance under the following conditions: Landing weight: Gross, Obstacle: 0 ft., Flaps: FULL, Power: Idle, Pressure Alt: Sea Level, Wind: 0 kts?ft.								
32. What is the expected climb performance at gross weight, 40°F at sea level pressure? ft/min								
33. What might you expect in the above situation if the ambient temperature has risen to 80°F? ft/min								
34. What is the no-wind power-off glide range at a pressure altitude of 3500ft and standard temperature? nm								
35. You may expect a take-off distance of ft (including ground roll) at sea level and gross weight if the ambient temperature is 10°C, and you have a head-wind of 10 kts								
36. What might you expect in the above situation if the ambient temperature has risen to 30°C? ft								
37. What is the glide ratio of this aircraft?								
38. You can expect to glide a distance of nm from an altitude of 3,500ft.								
39. What happens to the Garmin G5 AI and HSI in the event of an electrical failure?								
40. What actions should you perform in the event of an electrical failure?								

## **Notes**

This aircraft is equipped with the following, so take some time to become familiar with their use:

- ElectroAir Dual Electronic Ignition/Starter (with 2.5hr battery backup on one mag)
- Dual Garmin G5 (with 3.5-4hr battery backup per unit)
- FlyEI CGR-30P Engine Indication System
- Garmin GMA340 Audio Panel
- Garmin GNS430 GPS
- Garmin GNC255 Nav/Comm Radio
- Garmin GTX330 Transponder

## Weight and Balance for: DA20 N552MA

Item	Capacity	Weight	Arm	Moment
Empty Aircraft		1211	7.76	9397.36
Main Fuel			32.44	
Seating Row 1			5.63	
Baggage			32.44	
Totals				

## Verify all numbers with the Pilot Operating Handbook

Maximum Gross Weight: 1764
Maximum Takeoff Weight: 1764
Maximum Landing Weight: 1764
Maximum Non-Fuel Weight: 1671

## **Normal Center of Gravity Envelope:**

Weight: 1764 Minimum Arm: 8.07 Maximum Arm: 12.16
Weight: 1653 Minimum Arm: 7.95 Maximum Arm: 12.48
Weight: 1200 Minimum Arm: 7.95 Maximum Arm: 12.48

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