PA- 34 220 T

Q.1 Mark the Correct

(a) To feather a propeller of a inoperative engine in flight maintain direction and an airspeed above 85 KIAS

(b) The one engine inoperative air minimum control speed in 66 KIAS.

(c) The one engine inoperative best rate of climb is 92 KIAS.

(d) All of the above are correct.

Q.2 Should an engine fail during flight at an airspeed below 66 KIAS. What should be the action taken by pilot?

(a) apply rudder towards the inoperative engine to maintain direction control

(b) apply rudder towards the operative engine to maintain direction control

(c) As in a & lower the nose of the aircraft to accelerate above 66 KIAS.

(d) As in b & the throttle should be retarded to stop the your forces produced by inoperative engine.

Q. Which of the following is incorrect.

(a) when an engine is feathered the alternator gyro air & oil accumulator warning lights will remain illuminated.

(b) The propeller can be feathered only while the engine is retarting above 600.

(c) one engine inoperative performance will decrease if the prop of the inoperative engine is not feathered.

(d) both 1 and 2 are incorrect.

Q. the landing gear warning horn will sound.

Ans: **at low throttle setting if gear is not down and locked.**

Q. To execute manual extension of landing gear in flight

Ans: **Maintain speed below 85 KIAS landing gear selector switch to gear down & pull emergency gear extension knob.**

Q.6 Total fuel tank capacity:- **98 US Gallons**

Q.7 Usable Fuel :- **93 US Gallons**

Q.8 Engine fails during Take off speed 82 KIAS less R/W to stop , pilot should

Ans:- **Close throttle immediately, apply max brakes, Battery off fuel selector off, continue stop straight ahead**

Q.9 Type of Battery fitted +**24 Volts, +65 amps,(19 amps-hrs)**

Alternator **:+28 Volts,+ 60 amps**

Q.10 Engine control consist of

(a) Throttle lever

(b) Mixture control

(c) Propeller control

(d) all of the above.

Q11. To recover from unintentional spin immediate action to be taken

Ans.:- **Retard throttle to idle position than apply full opposite rudder**

Q.12 Nose landing gear extension & down locking:

(a) Aerodynamics load

(b) Springs

(c) Both (a) & (b) are correct.

Q.13 In the event of prop over speed

Ands: - **Retard the throttle to full aft & also move the prop control the full dec. Rpm.**

Q.14 Nose gear is steerable

(a) 30^{o}

(b) 13.5^{o}arc by combination of full rudder and brakes either side or 27° arc fully

Q.15 CG limits:

(a) T/O = 90.6" Forward 94.6" Rearward

(b) Land =86.7" Forward 94.6" Rearward

(c) Both are correct.

(d) Both incorrect

Q.16 One engine failure can be identified by

Ans: **Loss of thrust and yawing towards inoperative engine**

Q.17 CHT range normal EGT range normal

Ans: **240^{o} F 460^{o} F 1200 F 1525 F**

Q.18 Design maneuvering speed

Ans: **140 KIAS it decreases with lighter wt of A/c**

Q.19 Main gear / nose gear tyre pressure

Ans: **55/40**

Q.20 **V^{FE} 115 V^{LE} 130 V^{LO} 108 KIAS Vyse 92 KIAS Vmca 66 KIAS**

Q.21 **V^{NE} 205 Vno 166KIAS**

Q.22 Max T/o RPM

Ans: **2800 for 5 minutes.**

Q.23 Type of engine

Ans: **6 cylinders, Direct Drive, Horizontally opposed, Air cooled**

Q.24 **Feather(coarse) to non feather(fine) –oil pressure**

Unfeather(fine) to feather(coarse) – Nitrogen

Q.25 From which drain point contaminated fuel is drained:

(a) Each gas coater provided quick drain

(b) Cross feed drains

(c) As in (a) fuel quick drain

(d) Both (b) and (c)

Q.26 Engine prime time – 3 sec**(according to ambient temperature**)

Q.27 Hydraulic pressure for landing gear

Ans: **Electrically powered, reversible hydraulic pump.**

Q.28 Shimming of nose landing gear by

Ans: **Spring**

Q.29 Breaking system

Ans; **Separate hydraulic reservoir; 2 single discs, double puck brake assemblies**

Q.30 The landing gears are held in retracts position by

Ans: **Hydraulic pressure**

Q.31 SQUAT Switch in landing gear

Ans: **Prevents gear retraction on ground & in left gear.**

Q.32 Combustion heater is it approved above 25000 ?.

Ans: **Operation of combustion heater above 25000 is not approved**

Q.33 Mark the correct

(a) 4 fuel tank's vents, 1 under each wing

(b) 2 fuel tank vents, 1 under each wing.

(c) One common under fuselage

(d) 2 fuel drain for fuel tank

Q.34 Which is correct w.r.t weight & balance?

(a) Standard empty weight includes unusable fuel

(b) Datum is 78.4"

(c) Basic Empty weight is 3212 lbs.

(d) All are correct

Q.35 Mag drop is carried out at

Ans: **2000 rpm, max drop 150 rpm & the max difference drop shall not exceed 50 rpm.**

Q.36 Mark the correct statements

(a) T/o can be attempted on fuel selector on X-feed

(b) In the event of combustion heater overheat, the fuel, air & ignition to the heater is automatically cut off.

(c) Both are correct

(d) Both are incorrect

Q.37 While starting the engine the starter cranking is limited to a period of

Ans: **30 sec.**

Q.38 The stabilator incorporates an

Ans. **Anti servo tabs, this moves in the same direction as the stabilator.**

Q.39 Air filter for engine intake-

Ans. **Paper element**

Q.40 upper Red line radial signifies

Ans: **Vne (never exceed speed) 205 knots**

Q.41 Blue line radial signifies-

Ans: **Vyse(one engine inoperative best rate of climb speed) =92 KIAS**

Q.42 Yellow line radial signifies

Ans: **caution range(in smooth air only) = 166-205 KIAS**

Q.43 lower red radial line

Ans: **Vmca(one engine inoperative air minimum control speed) = 66 KIAS**

Q.44 Oil viscosity : **below 40 F: 1065(aviation grade) 30 (SAE no.)**

Above 40 F: 1100(") 50(")

Q45. Wing loading : **22.8 lbs per sq ft**

Power loading**: 10.8 lbs per hp**

Q46. Stall warning pg 7-50

Q47. towing pg 8-5

Q48. Propeller type **: three blade, constant speed, controllable pitch and feathering Mc Cauley directly connected to crankshaft**

Q49. During single engine operation fuel selector should be : **selector for the operating engine should be on X-feed and selector for inoperative engine should be on OFF**

Q50. Should the alternate air be used on ground: **no**

Q51. Basic Empty Weight: Standard empty weight + Optional Equipment (a/c weight +? Unusable fuel + Unusable fluids + full oil)

Q.52 Propeller type: Constant speed, hydraulically activated, full feathering.

Q.53 Max Ground Speed RPM above 32" HG manifold. Between 2000 to 2200 avoid continuous Ground Operation (for 2- blade propellers only) avoid continuous ground operation between 1700 to 2100 RPM. In X - & tail winds over 10 knots.

Q.54 Propeller over speed: (Caused by propeller governor mol for action & allows clouds to rotate at full low pitch)

- Reduce throttle
- Propeller full decrease RPM (do not feather)
- Check for control availability.

Then reduce airspeed & throttle maintains 2600 RPM.

Q.55 Alternate air for engine

Automatic alternate air door open if primary are source is blocked but alternate air is unfiltered & should not be used for ground operation.