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INSTRUMENT STUDY 2

Candidate Name_____ **Date**_____ **Completion**_____

MEMORY AIDS

1. "Turn, Time, Twist, Throttle, Talk, Tires, Tune." Explain.

2. "Climb, Course, Clean, Call, Confirm, Cruise Check, Clearance Limit." Explain

3. "Tobago 771TR you are cleared to the Middletown airport, upon entering controlled airspace fly heading 290 for radar identification. Radar vectors Victor 265 direct Harrisburg direct, Climb and maintain 2000, expect 6000 in 10 minutes. Departure frequency will be Potomac on 128.7. Squawk 5314. Hold for release."

   Copy this clearance using appropriate shorthand technique.

   C
   R
   A
   F
   T

4. What do the words "clearance on request mean?"

5. What do the words “hold for release” mean? Can an airplane depart IFR without a release? Who grants the release?

6. “November 771TR, from Fort Meade. You are released at 12:20. Time now 12:15. Clearance void if not off by 12:25. If still not off, advise no later than 12:25 of your intentions.”

   Explain your responsibilities given these instructions. What is clearance doing to the surrounding airspace for you. How should you read this clearance back?

NAVIGATION

1. How can a pilot determine if a VOR receiver is working? A VOR emitter? A Glide Slope Reciever? A Glide slope emitter? An NDB emitter? An ADF receiver? A GPS receiver?

2. How does a pilot avoid reverse sensing?

3. What is the practical difference between a VOR, a VORTAC, and a VORDME to DME equipped aircraft? To GPS equipped aircraft?

4. Draw and label the symbols for a VOR, a VORTAC, and a VORDME.

5. What are the service volumes of High, Low, & Terminal VORs?

6. Explain how to intercept a radial. How do you decide how much intercept is needed?

7. Explain how to intercept an NDB bearing.

8. Define:
   Magnetic Heading
   Mag Bearing
   Relative bearing

9. What is the formula for finding your Magnetic Bearing?

b. MH = 030
   RB = 030 MB = ?

c. MH = 280
   RB = 160 MB = ?

10. Is there such thing as a VOR radial TO a station?

11. Is there such thing as an NDB bearing FROM a station?

12. Can you track inbound to or outbound from over a VOR radial from and an NDB bearing to?

13. True or False. VORs indicate position or angle from a point, not your direction.

14. Describe standard IFR obstacle clearance provisions along an airway in mountainous and non mountainous areas?

15. What is the specific definition of mountainous terrain?

16. What are the lateral dimensions of a Victor Airway?

CHARTS & PLATES

1. How does Jeppesen provide alternate airport information, take off minimums information, both standard and non standard. How does this contrast with the NOS presentation of the information?

2. Where does Jeppesen provide rate of descent information. How does NOS?

3. How does Jeppesen provide rate of climb per NM information? How does NOS? Where is the information to be found?

4. What is MSA? What is it used for?

5. What is: Draw these symbols.

MCA

MRA

COP

MEA

MOCA

OROCA

MORA

6. What is an MEA Gap?

7. How is a feeder route or transition drawn on an approach plate? How is that different from a fix identification line?

8. How can you differentiate between a race track procedure turn symbol and a missed approach hold symbol on an approach plate?

9. Draw the low enroute chart symbol for a distance marker showing a

Jeppesen NOS

a. Fix to fix leg measurement.

b. Fix to navaid.

c. Navaid to navaid