

Welcome to the

NIFA 2004 Regional SAFECON

Simulated Comprehensive Aircraft Navigation Test

NAME _____

CONTESTANT NUMBER _____

SCHOOL _____

INSTRUCTIONS: You will be given sixty (60) minutes to complete the following test. The test is made up of thirty-seven (36) multiple-choice and two (4) fill-in questions. Equipment permitted for use by contestants are: non-programable flight computer, plotter, pen, and pencil. Basic four-function only (addition, subtraction, multiplication, and division) calculators may also be used.

Mark you answers on the answer sheet provided by filling in the circle provided. Only the answer sheet will be graded. In case of ties, faster completion time takes precedence.

Write the serial number of this test packet (located at the top of this envelope) on your answer sheet in the space provided.

**DO NOT OPEN THIS ENVELOPE
UNTIL TOLD TO DO SO!**

1. After reviewing your certificates and your logbook, is everything in order for you to make this flight if you are planning a 4PM departure from Elkins?
 - A. Yes, all is well
 - B. No, you will need more landings
 - C. No, your pilot certificate is not valid, there is no Feb. 29
 - D. No, you will need a new medical

2. Looking through the maintenance records for your airplane, is the aircraft legal to make this flight as planned?
 - A. Yes
 - B. No, it will need a fresh annual
 - C. No, the ELT must be replaced
 - D. No, the transponder inspection is expired

3. While you are waiting for Bowdy to arrive at the airport, you calculate your ramp weight and CG for the first leg to CKB. (write in your answer to the nearest pound and 1/10th of an inch)

[Write your answer on the answer sheet, not this test!]


4. You decide to file a VFR flight plan for the first leg to Clarksburg. Your ETD is 2000 zulu. How long will ATC keep your flight plan on file for you?
 - A. 30 minutes
 - B. 1 hour
 - C. 2 hours
 - D. Indefinitely

5. For leg #1, you decide to cruise at 3,500 MSL at 75% best power. You figure your cruise OAT will be the same as your departure airport. How long do you anticipate this leg will take you?
 - A. 12:03
 - B. 12:52
 - C. 14:00
 - D. 14:59

6. Bowdy is a little late arriving at the airport, you finally depart at 4:19 PM local time. How should you open your flight plan?
 - A. Ask tower to relay your tail number to Flight Service
 - B. Call Elkins FSS on 122.2
 - C. Call Elkins FSS on 114.2 and listen on 122.1
 - D. Call Elkins FSS on 132.6

7. What is the minimum ceiling for you to depart from EKN?
 - A. There is none specified, as long as you can stay 500' below the clouds, it does not matter
 - B. You are in class G airspace, you just have to remain clear of the clouds
 - C. 1,000'
 - D. 2,000'

8. Where will you start your descent for Clarksburg?
 - A. Abeam Phillipi/Barbour Co. airport
 - B. Just past some abandoned railroad tracks
 - C. Over a creek
 - D. Over some power lines

9. What does this symbol  mean by the tower frequency for Clarksburg?
- A. Two-way radio communication is available
 - B. RCO facilities are located on the field
 - C. The tower is staffed by retirees
 - D. Radar approach and departure controls are available
10. You forgot what the general weather picture was supposed to look like for your route of flight tonight. What weather product would give you a good overview of areas of VFR, MFVR, and IFR along with associated cloud cover and visibility?
- A. Radar summary chart
 - B. Significant weather prognostic chart
 - C. Constant pressure analysis chart
 - D. Weather depiction chart
11. How long do you estimate leg #2 will take you if you plan to fly at 6,500 MSL at 65% economy cruise at 2,500 rpm?
- A. 28:20
 - B. 29:12
 - C. 30:33
 - D. 31:41
12. What will your takeoff distance over a 50' obstacle be on this leg? (write in to the nearest foot)

[Write your answer on the answer sheet, not this test!]

13. As you are climbing out, Bowdy asks how fast you will be flying on this leg. You tell him your cruise groundspeed will be...
- A. 122 mph
 - B. 118 knots
 - C. 140 mph
 - D. 93 knots
14. What land feature might you see off your left wing as you cross V38?
- A. Caves
 - B. Mines
 - C. Water wells
 - D. None of the above
15. What is your relative bearing to the Randolph Co. NDB (RQY) when you are over a fork in the road running east out of Smithville?
- A. 209°
 - B. 212°
 - C. 215°
 - D. 218°
16. What is your minimum safe altitude halfway through this leg?
- A. 2,000' AGL
 - B. 1,000' above the highest obstacle within 2,000' of the airplane
 - C. 500' AGL
 - D. No minimum altitude, just high enough that an emergency landing could be made without unneeded harm to people or property on the surface.

17. What are the minimum weather conditions under which VR1633 could be active?
- A. Basic VFR for the appropriate airspace class
 - B. VFR except surface vis of at least 5 sm and a 3,000 AGL ceiling
 - C. VFR except for an inflight vis of at least 5 sm and a 3,000 MSL ceiling
 - D. VFR except inflight visibility must be at least 5 sm and a 3,000 AGL ceiling
18. If you took off from CKB at 6:30 PM, when will you start your descent for landing at Boggs?
- A. 6:48 PM
 - B. 1851 zulu
 - C. 2252 zulu
 - D. 2249 local
19. Regarding the A/F D entry for Boggs, what does the note "Not Insp." mean?
- A. The FAA provided the information for the field
 - B. The owner of the field provided the basic field information
 - C. The field is not routinely inspected by the FAA as required by FAA Order 8166.3(e)
 - D. None of the above
20. How many gallons of 100LL did you burn on this leg?
- A. 5.2
 - B. 5.9
 - C. 6.5
 - D. 7.1
21. You and Bowdy hop out to briefly stretch your legs before heading off to Charleston to pick up another friend, Spud Whitman. What do you calculate your takeoff weight to be for leg #3? (write in to the nearest pound)

[Write your answer on the answer sheet, not this test!]

22. Using your best soft field technique, what do you estimate your ground roll to be on takeoff?
- A. 1,150'
 - B. 1,400'
 - C. 1,760'
 - D. 2,000'
23. What will your manifold pressure be in cruise on leg #3 if you plan to fly at 4,500 MSL at 65% economy with 2,200 rpm. You plan for an OAT at cruise of 17° C.
- A. 26.1"
 - B. 26.9"
 - C. 25.7"
 - D. 25.5"
24. How far out from Charleston can you expect to begin to receive radar services?
- A. 5nm
 - B. 10nm
 - C. 15nm
 - D. 20nm
25. What kind of services will Charleston provide for you?
- A. Safety alerts and traffic advisories only
 - B. Answer A plus limited vectoring and sequencing
 - C. Answer A plus limited vectoring, sequencing, and separation by weight class
 - D. Answer A plus limited vectoring, sequencing, and separation from IFR traffic

26. Just as you start your descent for Charleston, you notice your manifold pressure gauge rapidly dropping down to zero, fortunately your engine still is purring like a kitten. Can you expect to get this fixed at Charleston?
- A. Yes
 - B. No
27. How long did this leg take you?
- A. 15:49
 - B. 14:32
 - C. 16:58
 - D. 17:59
28. You decide to do your flight planning while the mechanic starts working on your airplane. You plan to fly at 7,500 MSL at 65% economy cruise and 2,500 rpm on the way home. How long do you figure this leg will take you?
- A. 38:49
 - B. 40:05
 - C. 41:22
 - D. 43:07
29. After finishing your flight planning, you walk over to the maintenance hangar. Unfortunately, the mechanic does not have the part needed to fix the manifold pressure gauge for your Lycoming IO-360 engine. What do you do?
- A. Find a good hotel, your airplane is done for the day.
 - B. Have the mechanic deactivate and placard it as inoperative, record it in the maintenance log, and then depart for home
 - C. Just leave, who will notice anyway
 - D. Put a sticker on it that says "Inoperative" and then fly on home
30. Oh well, you decide to head home regardless of your answer to the previous question. Spud meets you at the airplane and hops in the back seat. He weighs 184 pounds. After the delay for the maintenance work, you depart at 11:30PM. What is the forecast for your arrival time in Elkins?
- A. Very pleasant, calm wind, clear skies, unrestricted visibility
 - B. Getting kind of marginal, calm wind, clear skies, 4 sm visibility in fog
 - C. Not the best, calm wind, clear skies, 4 sm visibility in mist
 - D. Poor, calm wind, 2 sm visibility in mist, 100' scattered clouds
31. What is the magnetic variation at CRW?
- A. 6.4°W
 - B. 7°W
 - C. 7.3°W
 - D. 7.6°W
32. As you are climbing out, you see another airplane. All you can make out is the green navigation light and the tail beacon. Who has the right of way?
- A. He does
 - B. You do
33. Above what altitude does night vision begin to get impaired?
- A. 5,000 MSL
 - B. 10,000 MSL
 - C. 12,500 MSL
 - D. 14,000 MSL

34. What will your magnetic heading be in cruise on the way home to Elkins?
- A. 067°
 - B. 063°
 - C. 074°
 - D. 070°
35. What will your DME read from the EKN VORTAC when you reach your top of descent?
- A. 11.5 nm
 - B. 14.7 nm
 - C. 20.1 nm
 - D. None of the above
36. The latest ASOS report from EKN is calling winds 130° at 15 knots and 3sm visibility in mist with a ceiling of 900' the altimeter 30.15" and 18°C. Can you continue in and land?
- A. No, you need a 1,000' ceiling
 - B. No, you need 3 sm visibility in Class E airspace
 - C. Answers A&B
 - D. Yes, you can continue and land
37. What will be the most suitable runway for landing?
- A. 05
 - B. 23
 - C. 14
 - D. 32
38. What will your landing distance over a 50' obstacle be on that runway? (write in)
- [Write your answer on the answer sheet, not this test!]**
39. How much flight time did you log today?
- A. 1.5 hrs.
 - B. 1.7 hrs.
 - C. 1.9 hrs.
 - D. 2.1 hrs.
40. If you shared the cost of fuel with your friends, how much was your share of the fuel bill if 100LL costs \$2.86 per gallon?
- A. \$20.65
 - B. \$28.63
 - C. \$32.53
 - D. \$35.61