AVIA 123 – Aviation Weather (Jeppesen Text) - Pressure, Altitude & Density

Chapter 3 Study Guide

1. Resistance to vertical movement of air masses is called ________ Balance (3-3)

2. The most basic instrument for measuring pressure is a ________ Barometer (3-4)

3. Baros is a Greek word meaning __________ (3-4)

4. A barometer measures the ________ of air (3-4)

5. Most aviation uses (non-laboratory) of pressure involve an ____________________
   barometer (3-5)

6. The term meaning “not wet” is ______________ (3-5)

7. Sea Level Pressure is the weight of the air at ________________ (3-7)

8. Station Pressure is the weight of the air at __________________________ (3-6)

9. To calculate Mean Sea Level pressure using Station Pressure, you would add
   ______ for every 1000 feet of altitude above Sea Level to the pressure you read
   on your local barometer. (3-7)

10. A line of equal pressure is called an __________ (3-8)

11. A pressure gradient is the ____________________ over a given distance (3-8)

12. On a surface analysis chart a large H represents an area of __________ pressure, and a large L represents an area of __________ Pressure (3-8)

13. According to the class text, the Bermuda High is an area of ________________
    usually located in the __________ Ocean (3-8/9)

14. A line of Low Pressure is called a ____________ (3-8/9)

15. A line of High Pressure is called a ____________ (3-8/9)

16. Three areas of High Pressure the class text discusses are the ____________,
    ____________, and the ____________ (3-8/9)

17. Two areas of Low Pressure the class text discusses are the ____________ and the
    ____________ (3-8/9)
18. On a weather chart, close spacing of pressure gradients usually represents areas with high ______ (3-9/10)

19. A Constant Pressure Chart presents information on pressures at _____ altitudes (3-10/11)

20. On a Constant Pressure Chart the number in the small black box represents altitude in ________ (3-11)

21. To determine the height of a pressure altitude, Pilots should set __________ in the Aircraft Altimeter Kollsman window (3-11)

22. The Altimeter in the an Aircraft is usually an __________ Barometer (3-12)

23. In aviation, the three most important altitudes are:
   a. ____________ Altitude - the altitude you read on the Altimeter
   b. ____________ Altitude - the altitude your aircraft is above Mean Sea Level
   c. ____________ Altitude - the altitude your aircraft is above the ground
   d. Altitude (c.) is also called AGL which means ____________________

24. To correct your altitude when you fly, you make a change in the __________ setting (3-12)

25. From Surface up to about 12,000 feet, a setting change of 0.01 inch represents ________feet of altitude (3-12)

26. If you change the setting by increasing the number in the Adjustment Window, you will __________ the number you read on the Altimeter. (3-12)

27. If you set the Field Elevation into your altimeter, what kind of altitude (from 40 above) are you reading? (3-12/13)

28. At what higher altitude (above 10,000 feet in the US) do set 29.92 inches in your altimeter to make sure every airplane uses the exact same altitude reference? ______ (3-12/13)
29. What three things contribute to altitude errors (indicated altitude is different from the true altitude of the aircraft)? (3-12/13)
   e. ____________________________
   f. ____________________________
   g. ____________________________

30. In a METAR weather report, what do the letters SLP mean? ____________ (3-15)

31. What does COR mean in the METAR Report ______________ (3-16)

32. In a METAR Report, what is the order of information elements
   h. L ______________
   i. DT ______________
   j. W ______________
   k. V ______________
   l. S ______________
   m. TD ______________
   n. A ______________
   o. R ______________

33. In a METAR Report, what does the letter A in front of the pressure value mean? ____________ (3-16)

34. In a METAR Report what does the letter Q in front of the pressure value mean? ____________ (3-16)

35. Density Altitude is Pressure altitude corrected for non-standard
   p. ________________, and
   q. ________________