

## STAGE II EXAM

### Meteorology for Pilots

Completely darken only one circle for each question on the answer form.

#### BASIC WEATHER THEORY

1. What is the major motivating force behind atmospheric circulation?
- A. Rotation of the earth
  - B. High and low pressure belts
  - ☒ C. Uneven heating of the earth's surface

#### WEATHER PATTERNS

2. What processes result in moisture being added to unsaturated air?
- ☒ A. Evaporation and sublimation
  - B. Condensation and sublimation
  - C. Condensation and latent heat of vaporization
3. What weather conditions can you expect with a small or converging temperature/dewpoint spread?
- ☒ A. Fog and low clouds
  - B. Strong surface winds
  - C. Low visibility and gusty winds
4. With the approach and passage of a frontal system in the United States, what pressure and wind direction changes take place?
- A. The pressure falls as the front approaches and rises after its passage, while the wind direction shifts to the left after frontal passage.
  - B. The pressure rises as the front approaches and falls after its passage, while the wind direction shifts to the left after frontal passage.
  - ☒ C. The pressure falls as the front approaches and rises after its passage, while the wind direction shifts to the right after frontal passage.

#### WEATHER HAZARDS

5. What conditions are necessary for the formation of thunderstorms?
- ☒ A. Unstable air, a lifting force, and high moisture levels
  - B. High wind velocities aloft and a small temperature/dewpoint spread
  - C. The close proximity of a high pressure system to a steep pressure gradient
6. Thunderstorms and squall lines are generally associated with what type of front?
- A. Stationary
  - ☒ B. Fast-moving cold
  - C. Slow-moving cold
7. Select the true statement regarding wind shear.
- A. Wind shear is a sudden, drastic shift in wind speed that occurs in a horizontal plane below 1,000 feet AGL.
  - B. A wind shear alert is usually issued if a reading from a LLWAS sensor differs from the mean by 3 knots.
  - ☒ C. A microburst—one of the most dangerous sources of wind shear—is a downdraft associated with convective activity.

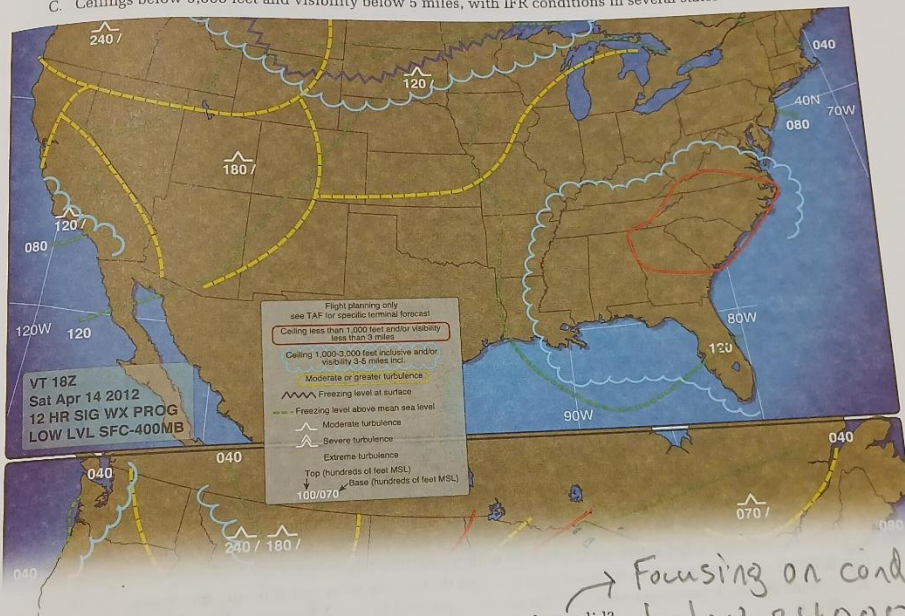
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GRAPHIC WEATHER PRODUCTS

Yellow dash info. in Meneue

11. According to the low-level significant weather prognostic chart, what weather is forecast for the southeastern portion of the United States?

- A. Moderate or greater turbulence below 12,000 feet MSL
- B. A freezing level at 12,000 feet MSL and VFR conditions at the surface
- C. Ceilings below 3,000 feet and visibility below 5 miles, with IFR conditions in several states



STAGE II

12. To what altitude is the U.S. low-level significant weather prog chart valid?

- A. 12,000 feet
- B. 18,000 feet
- C. 24,000 feet

13. What weather data can you obtain from a surface analysis chart?

- A. Areas of VFR, IFR, and MVFR conditions
- B. The location of fronts and pressure systems
- C. Forecast surface winds and temperatures at selected reporting stations

SOURCES OF WEATHER INFORMATION

14. If the departure time for your flight is six or more hours away, what type of weather briefing is appropriate?

- A. Outlook briefing
- B. Standard briefing
- C. Abbreviated briefing

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15. Select the true statement regarding aviation weather sources.
- A. A center weather advisory (CWA) is a scheduled alert issued by tower controllers to warn pilots of adverse weather.
  - ☒ B. Call Flight Service for a phone briefing for your specific flight at 1-800-WX-BRIEF or obtain an online weather briefing at 1800wxbrief.com.
  - C. TIBS is a briefing tool that provides adverse conditions, current conditions, enroute and destination forecasts, and winds aloft for a route of flight.
16. What information should you provide to a Flight Service weather briefer?
- A. Your full name and address
  - ☒ B. Whether the flight is VFR or IFR
  - C. A summary of your qualifications
17. Select the true statement regarding data link weather.
- A. Data link weather services provide information on METARs and TAFs only.
  - ☒ B. Data link weather services are often included with GPS and EFB cockpit or tablet display systems.
  - C. You can rely solely on The weather information displayed using a data link is real-time and should be thought of as instantaneous, up-to-date information.

## FEDERAL AVIATION REGULATIONS

18. Under what circumstances is a private pilot permitted to carry a passenger who is clearly under the influence of drugs?
- ☒ A. A passenger under the influence of drugs may be carried in an emergency.
  - B. Carrying any passenger who is intoxicated or under the influence of drugs is prohibited.
  - C. When the passenger is a medical patient under proper care, and the pilot carries a logbook endorsement for the transportation of medical patients.
19. What preflight activities are required by the FARs for a cross-country flight?
- A. Filling out a navigation log and filing a VFR flight plan
  - B. Notifying ATC of your route of flight and obtaining a transponder code for flight following
  - ☒ C. Reviewing the information concerning that flight, including weather reports and forecasts, fuel and runway requirements, and alternatives available if you cannot complete the planned flight
20. As pilot in command, what action must you take with regard to safety belts?
- ☒ A. Brief all passengers on how to fasten and unfasten their safety belts and shoulder harnesses.
  - B. Ensure that each passenger under the age of two is secured in an FAA-approved child safety seat during the flight.
  - C. Ensure that passengers wear safety belts from the time the airplane first moves for the purpose of flight until it stops.
21. What action should you take if you receive a clearance that will cause you to deviate from an FAR?
- ☒ A. Refuse the clearance, and request an amended clearance.
  - B. Accept the clearance, because ATC has assumed responsibility for the deviation.
  - C. Accept the clearance, but do not comply with the portion of the clearance that would cause you to violate a regulation.
22. Which items are required to be in the airplane?
- A. Airworthiness certificate, registration certificate, and title of ownership
  - ☒ B. Airworthiness certificate, registration certificate, and operating limitations
  - C. Airworthiness certificate, registration certificate, and aircraft and engine logbooks

## Private Pilot Exams

23. You may *not* operate an aircraft in aerobatic flight under what circumstances?
- A. When the flight visibility is less than 5 statute miles
  - ☒ B. Over any congested area of a city, town, or settlement
  - C. Within 10 nautical miles of the centerline of any Federal airway
24. According to NTSB Part 830, which of the following occurrences would require immediate notification of the NTSB?
- A. A near miss
  - B. Damage in excess of \$25,000 to property other than the aircraft
  - ☒ C. Injury to any person or property, regardless of the extent involved
25. According to NTSB Part 830, when is the operator of an aircraft required to notify the NTSB?
- A. When the damage to an airplane exceeds \$300
  - ☒ B. If an aircraft experiences a flight control system malfunction or failure
  - C. When an aircraft is involved in any incident, regardless of the damage received