**KEY - The Atmosphere Aloft, Project Atmosphere Module**

500-mb Map Questions (Figure 6)

1. The lowest reported height for a pressure reading of 500 mb in Washington and the highest in Texas:
    - Answer: (b) 5640 … 5940
2. The 500-mb pressure surface is generally tilted:
    - Answer: (a) from higher elevations in the south to lower in the north
3. The closed contour line in Texas encloses ___ elevations:
    - Answer: (a) higher
4. The constant-pressure surface is lower where temperatures are ___:
    - Answer: (a) colder
5. Where is the height of a given constant-pressure surface generally highest?
    - Answer: (a) near the equator
6. Wind direction is generally aligned to nearby contour lines:
    - Answer: (a) parallel

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Fluid Earth Viewer Temperature Comparisons

7. Temperature change from Earth's surface to 200 mb cruise level varies ___ degrees Celsius:
    - Answer: (c) 20 to 60
8. Temperature at both levels generally ___ as you travel north:
    - Answer: (a) decreases
9. Temperature at cruise level generally ___ as you travel north:
    - Answer: (b) increases

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Fluid Earth Viewer Wind Speed Comparisons

10. Wind speed generally ___ with altitude:
    - Answer: (b) increases
11. A "ribbon" of highest wind speeds is present at the ___ level (jet stream):

- Answer: (c) cruise, or 200-mb

12. The ___ level is considered the steering level for weather systems:
    - Answer: (b) cloud, or 500-mb

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Evaluate Section (Review)

13. Half of the air molecules within the atmosphere occur below an altitude of:
    - Answer: (c) 5.5 km
14. The boundary between the troposphere and stratosphere is called the:
    - Answer: (b) tropopause
15. Air pressure decreases most rapidly with altitude in the ___ troposphere:
    - Answer: (a) lower
16. Upper-air observations by NWS radiosondes do not include:
    - Answer: (d) cloud cover
17. In winter, the height of the 500-mb pressure surface is generally highest in:
    - Answer: (d) the southern U.S.
18. The highest wind speeds in the troposphere are found:
    - Answer: (c) between 300 and 200 mb

Acknowledgment: The author(s) used ChatGPT to pull the correct answers from the module document and then double-checked this with the module questions