

SECOND EXAM - Summer/2016

GEOGRAPHY 2202 - NATURAL HAZARDS

Name \_\_\_\_\_

PART I - DIAGRAMS (45 points)  
NO OMITTS ON DIAGRAMS.

Cloud and Jet Stream Diagrams (16 points)

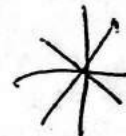
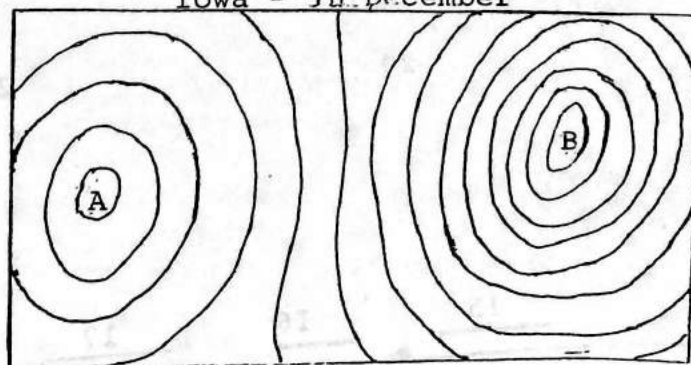
On the Cloud Diagrams and the Jet Stream Diagram you will find the diagrams for the questions below. CIRCLE THE CORRECT ANSWER.

1. Which Cloud Diagram, A, B, or C, would best show the characteristics of a self-perpetuating supercell thunderstorm?
2. At which location on the Jet Stream diagram would you most likely find cloud A, between a) 10 and d, b) 11 and e, or c) it doesn't "fit" anywhere.
3. On cloud diagram B draw a wall cloud at the location you would expect it to form.
4. On the Jet Stream diagram, if a thermally induced HI pressure area was located at 12, would a low or a high more likely exist at 10?
5. On the Jet Stream diagram, would the air at 'd' be a) converging, or b) diverging?
6. On the Jet Stream Diagram if a HI existed at 12 would the air be a) converging or b) diverging?
7. Of the three cloud diagrams, A, B, and C, which would you expect to display the least violence and be of the shortest duration?
8. At 29 on Cloud B diagram, is the process of a) evaporation, or b) condensation more likely taking place?

THERMALLY Induced Pressure Cell Diagram (9 points)

1. Would the wind be blowing a) into, or b) out of pressure cell B?
2. Which pressure cell, A or B, is more likely thermally induced.?
3. Are the winds blowing at a greater velocity in pressure cell A or B?
4. Would the winds in cell B more likely be a) rising, compressing, and cooling, b) descending, compressing, and warming, c) rising, expanding, and cooling, or d) descending, compressing, and cooling?
5. Would the winds in cell A be blowing in a a) clockwise direction, or b) in a counterclockwise direction in the northern hemisphere?
6. Instability, moisture, lousy weather, and low pressure are more closely associated with which cell, A or B?

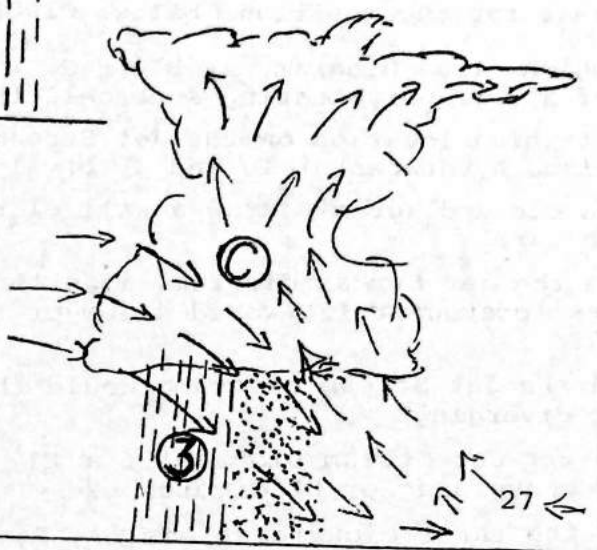
Iowa - in December



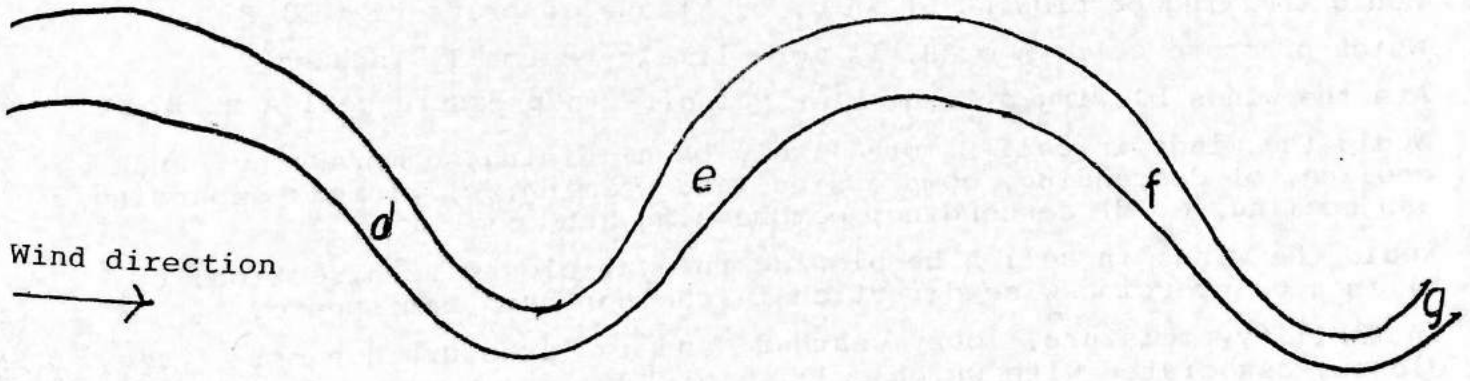
DO NOT REMOVE THIS STAPLE



CLOUD DIAGRAMS



JET STREAM DIAGRAM



19

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21

13

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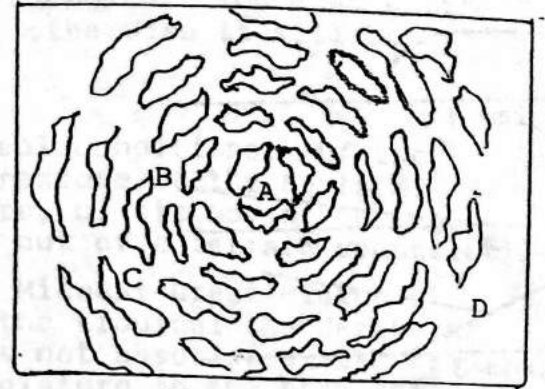
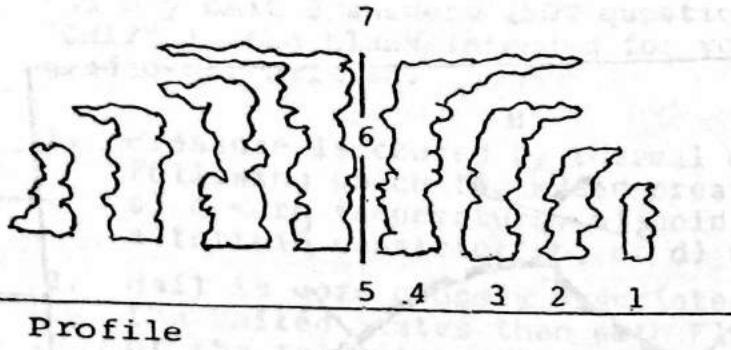
16

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10

Hurricane Diagrams (12 points)

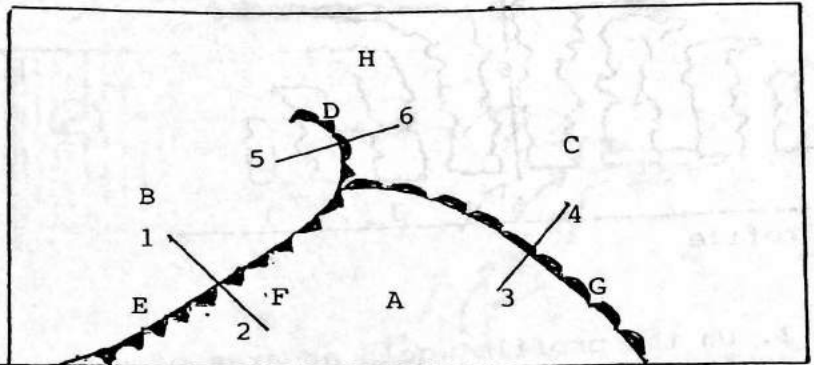
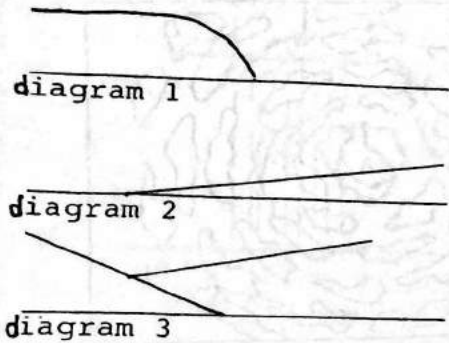


Satellite View

1. On the profile would an area of no precipitation and clear skies be located at 1, 2, 3, 4, or 5?
2. On the profile would the winds be blowing at the greatest velocity in the vicinity of 2, 3, 4, or 1?
3. On the satellite view are the winds at A a) rising, or b) descending?
4. On the satellite view would the lowest pressure be located at A, B, C, or D?
5. On the satellite view would the winds be blowing a) in a clockwise direction, or b) in a counter-clockwise direction in the northern hemisphere?
6. On the satellite view put an "X" in the quadrant having the strongest winds.

NO OMITTS ON THIS DIAGRAM

Mid-latitude cyclone diagram (8 points)



- \_\_\_ 1. Place the number of the diagram (1, 2, or 3) that best represents the profile of conditions along line 1-2 on the cyclone diagram.
- \_\_\_ 2. Ditto for line 3-4.
- \_\_\_ 3. Ditto for line 5-6.
- \_\_\_ 4. What sector would contain the coldest air, A, B, or C?
- \_\_\_ 5. Air mass designated "mTg" would more likely be located at A, H, or C?
- \_\_\_ 6. If a squall line were present it would more likely be located near A, B, C, H, or F?
- \_\_\_ 7. Drizzle, showers of long duration, non-violent weather is more closely associated with weather near the front at G, the front at E, or the front at D?
- \_\_\_ 8. Occluded Front would best represent the cyclone near E, G, or D?
- \_\_\_ 9. What would be the three-letter air mass designation for the air at B?

YOU MAY OMIT ONE ANSWER ON THIS DIAGRAM