

## Meteorology TEST

**Part 1: The Earth's Atmosphere and Air Pressure**

1. In which layer of the atmosphere do YOU live? (A) (B) (C) (D)  
 A) mesosphere  
 B) troposphere  
 C) thermosphere  
 D) stratosphere
2. The ozone layer \_\_\_\_.  
 (A) breaks apart meteorites as they enter Earth's atmosphere  
 (B) protects us from the carbon dioxide in the atmosphere  
 (C) is the superhighway for major weather storms  
 (D) protects Earth from harmful radiation in the sunlight
3. The jet stream \_\_\_\_.  
 (A) breaks apart meteorites as they enter Earth's atmosphere  
 (B) is an area in the atmosphere where airplanes travel  
 (C) is the superhighway for major weather storms  
 (D) protects Earth from the UV radiation in the sunlight
4. The ozone layer and the jet stream are found in the \_\_\_\_.  
 A) mesosphere  
 B) troposphere  
 C) thermosphere  
 D) stratosphere (A) (B) (C) (D)
5. Minor weather systems and clouds are found in the \_\_\_\_.  
 A) mesosphere  
 B) troposphere  
 C) thermosphere  
 D) stratosphere (A) (B) (C) (D)
6. What force holds Earth's atmosphere around the planet?  
 A) air pressure  
 B) convection current  
 C) gravity  
 D) centripetal force (A) (B) (C) (D)
7. The force of air on an object due to gravity is the air pressure.  
 A) True  
 B) False (A) (B) (C) (D)
8. High pressure areas bring \_\_\_\_\_ skies.  
 A) clear  
 B) cloudy  
 C) rainy  
 D) dark (A) (B) (C) (D)
9. High pressure areas are characterized by \_\_\_\_\_ temperatures.  
 A) warmer  
 B) cooler  
 C) stationary  
 D) occluded (A) (B) (C) (D)



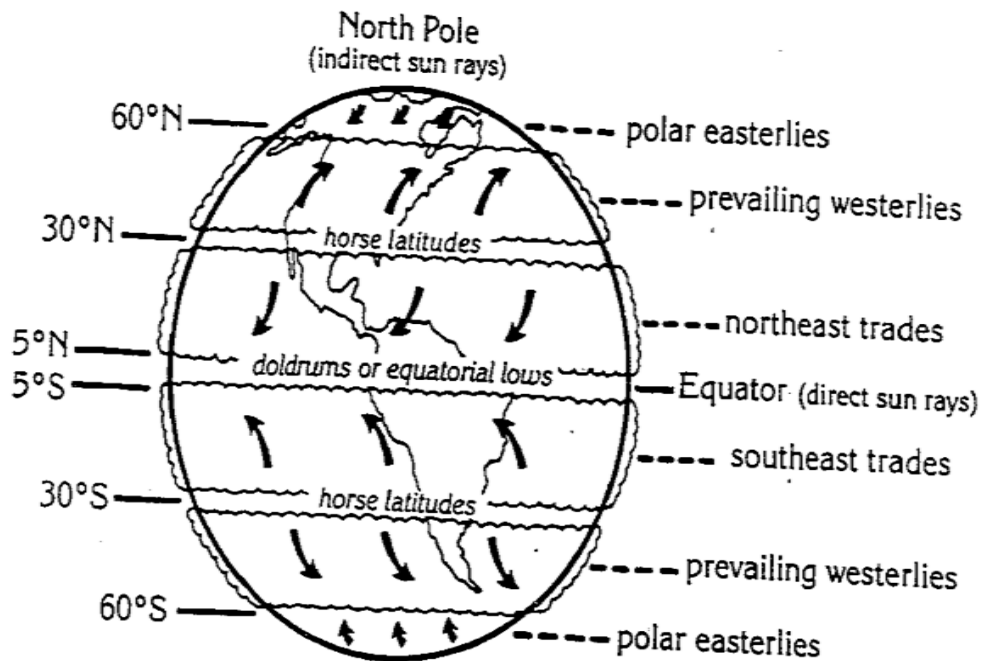
10. Humidity is \_\_\_\_\_ in a low pressure system. (A) (B) (C) (D)  
A) decreasing                      B) staying the same  
C) non-existent                      D) increasing
11. High pressure areas move away from low pressure areas. (A) (B)  
A) True                                      B) False
12. Denver, Colorado has a higher air pressure than Chicago, Illinois. (A) (B)  
A) True                                      B) False

**Part 2: Winds**

13. The Earth is heated \_\_\_ because it is \_\_\_ as it travels around the sun. (A) (B) (C) (D)  
A) evenly; tilted                      B) evenly; straight up and down  
C) unevenly; tilted                      D) unevenly; straight up and down
14. Hot air \_\_\_ and cold air \_\_\_ which causes \_\_\_\_.  
(A) rises; rises; storms  
(B) rises; falls; winds  
(C) falls; rises; winds  
(D) falls; falls; storms
15. Global winds are twisted due to Earth's rotation. This phenomenon is known as the \_\_\_ which turns the winds to the \_\_\_ in the Northern hemisphere and to the \_\_\_ in the Southern hemisphere. (A) (B) (C) (D)  
A) Convection Current; right; left                      B) Coriolis Effect; left; right  
C) Coriolis Effect; right, left                      D) Convection Current; left; right



Use the following diagram of global winds to answer questions #16 through #18.



16. Which winds affect the weather in Honolulu, Hawaii?  
 A) Polar Easterlies    B) Prevailing Westerlies    C) Northeast Trades    D) Southeast Trades
17. Which winds affect the weather in Anchorage, Alaska?  
 A) Polar Easterlies    B) Prevailing Westerlies    C) Northeast Trades    D) Southeast Trades
18. Which winds affect the weather in Fox Lake, Illinois?  
 A) Polar Easterlies    B) Prevailing Westerlies    C) Northeast Trades    D) Southeast Trades
19. Gentle winds that extend over distances of less than 100 kilometers cause local winds and are called \_\_\_\_.  
 A) gusts    B) fronts    C) gales    D) breezes
20. Fronts are created by the different \_\_\_\_ of warm air and cold air.  
 A) velocity    B) density    C) volume    D) temperature



For questions #21 through #23. Match the description to the proper name. Each choice is used ONCE or NOT AT ALL.

A) cold	B) occluded	C) stationary	D) warm
21. A front where neither the warm nor the cold air mass is moved. These fronts bring weather that lasts for long periods of time.			(A) (B) (C) (D)
22. A front where a mass of cold air moves under a mass of warm air. It produces storms that are short, scattered, and violent.			(A) (B) (C) (D)
23. A front where a mass of warm air moves under a mass of cold air. It produces storms that cover large areas.			(A) (B) (C) (D)

**Part 3: Water and the Weather**

For questions #24 through #28: Match the definition or description to the proper term. Some terms WILL NOT be used; no term is used twice.

A) condensation	B) evaporation	C) transpiration	D) humidity	E) precipitation	F) wind chill
24. Any form of water that falls from a cloud is ___.				(A) (B) (C) (D) (E) (F)	
25. The process of going from liquid to gas is ___.				(A) (B) (C) (D) (E) (F)	
26. What temperature the wind feels against your skin is the ___.				(A) (B) (C) (D) (E) (F)	
27. The amount of water vapor that is in the air is the ___.				(A) (B) (C) (D) (E) (F)	
28. The process of going from gas to liquid is ___.				(A) (B) (C) (D) (E) (F)	

For questions #29 through #31 : Match the description to the proper term.

A) cirrus clouds	B) cumulus clouds	C) stratus clouds
29. Low to middle latitude clouds that look like sheets; usually bring a steady drizzle over large areas of land.		(A) (B) (C)
30. Thick, fluffy clouds associated with fair weather and occasional showers; if they form at high altitudes, they produce thunderstorms.		(A) (B) (C)
31. Wispy, feather clouds that form at high altitudes; these clouds don't really affect the weather since they are so high in the atmosphere.		(A) (B) (C)

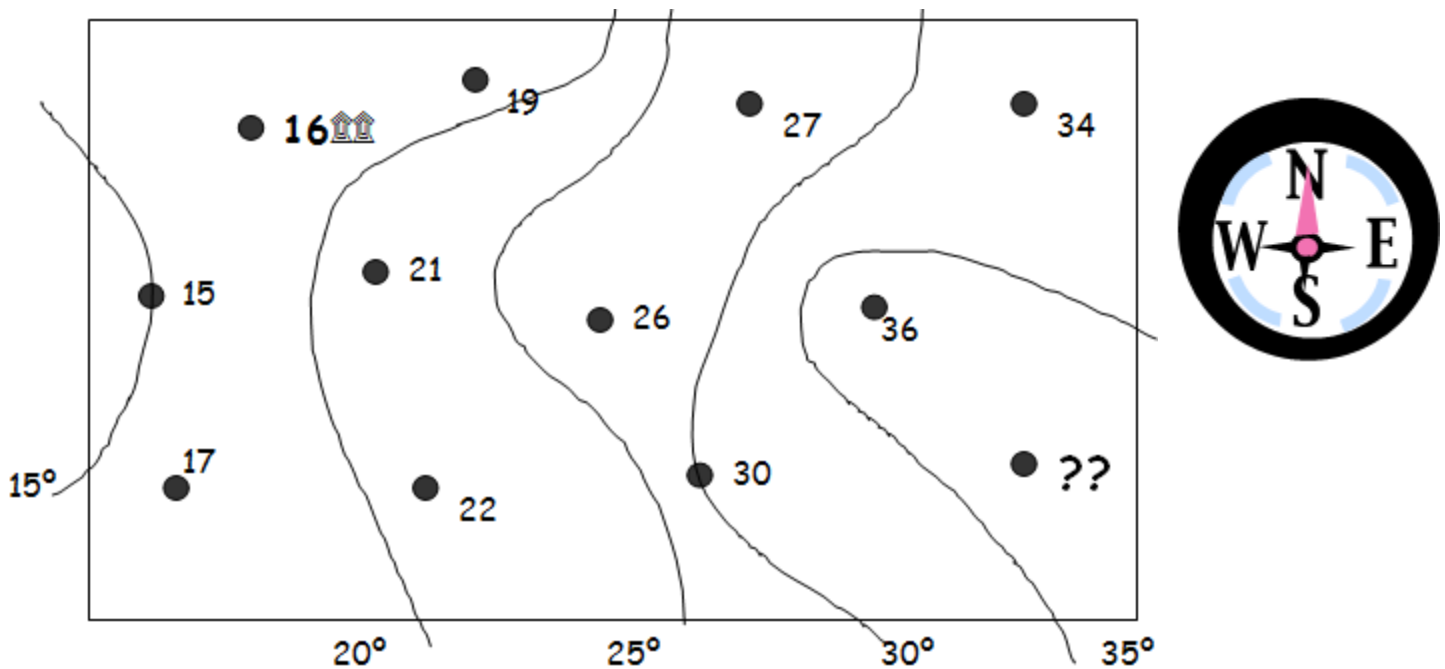


**Part 4: Predicting the Weather**

32. Why do we try to predict the weather?

- (A) It keeps the meteorologists employed.
- (B) It allows us to use really neat technology.
- (C) It makes people feel good to know they aren't the only ones that make mistakes.
- (D) It can warn people of the potential for dangerous situations.

Use the following isotherm map to answer questions #33 through #39. SOMEWHERE IN THE UNITED STATES...



33. For the town that is currently reporting a temperature of 16°F, the pressure is \_\_\_\_\_. (A) (B)  
 a. High b. Low
34. For the town that is currently reporting a temperature of 16°F, the sky is \_\_\_\_\_. (A) (B)  
 a. Cloudy b. Clear
35. For the town that is currently reporting a temperature of 16°F, the humidity is \_\_\_\_\_. (A) (B)  
 a. Rising (high) b. Falling (low)
36. For the town that is currently reporting a temperature of 16°F, evaporation is occurring \_\_\_\_\_. (A) (B)  
 a. Quickly (high rate) b. Slowly (low rate)
37. If precipitation were to fall in this town, what would it be? (A) (B) (C) (D)  
 a. hail b. sleet c. snow d. rain



38. For the town that has “??,” what would the temperature be? (A) (B) (C) (D)  
 a. 35°F b. lower than 35°F  
 c. higher than 35°F d. 30°F
39. If precipitation were to fall in the town that has “??”, what would it be? (A) (B) (C) (D)  
 a. hail b. sleet c. snow d. rain

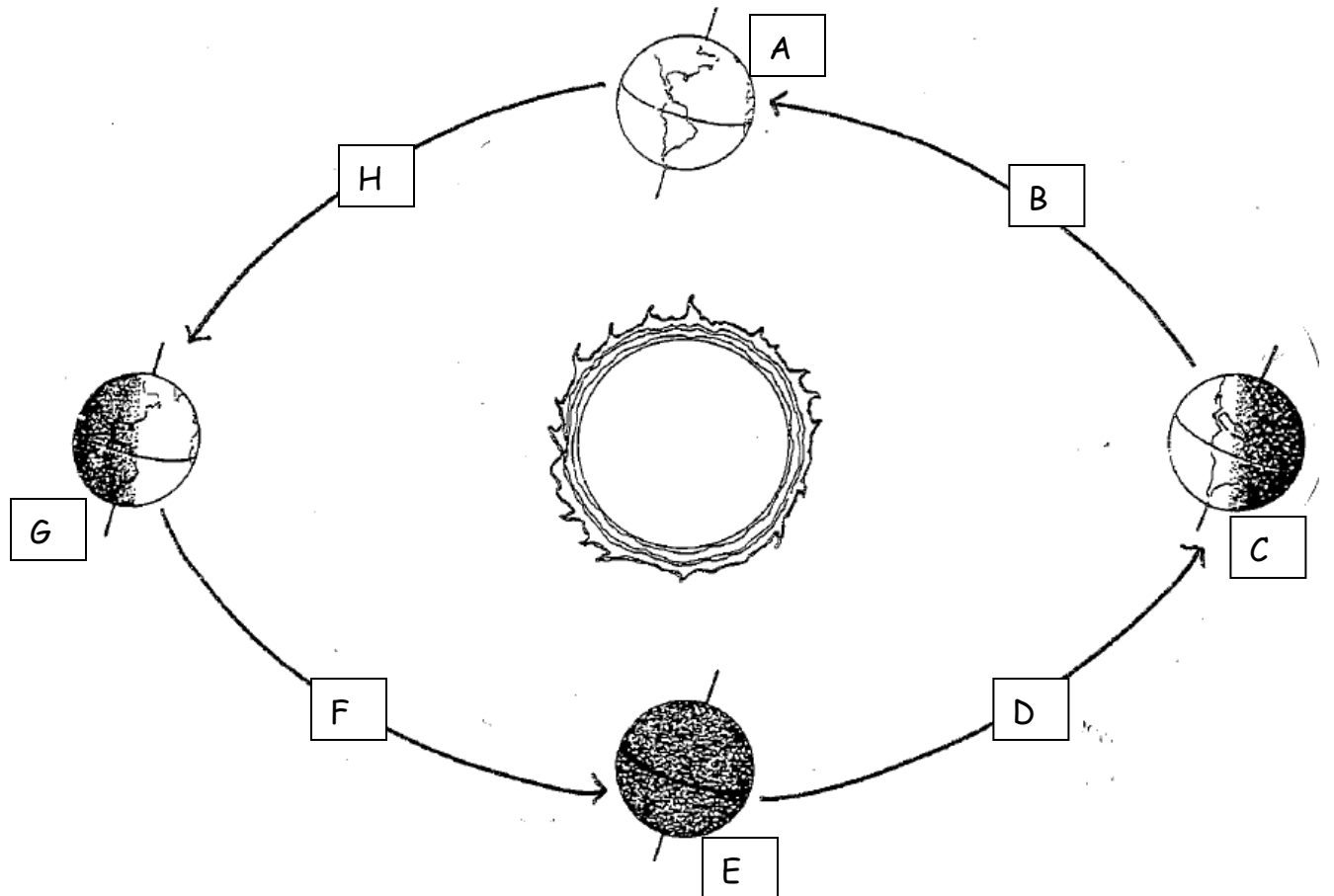
**Seasons**

40. The Winter Solstice occurs on or around: (A) (B) (C) (D)  
 A. March 21<sup>st</sup> B. June 21<sup>st</sup> C. September 21<sup>st</sup> D. December 21<sup>st</sup>
41. The Summer Solstice occurs on or around: (A) (B) (C) (D)  
 A. March 21<sup>st</sup> B. June 21<sup>st</sup> C. September 21<sup>st</sup> D. December 21<sup>st</sup>
42. The Vernal Equinox occurs on or around: (A) (B) (C) (D)  
 A. March 21<sup>st</sup> B. June 21<sup>st</sup> C. September 21<sup>st</sup> D. December 21<sup>st</sup>
43. The Autumnal Equinox occurs on or around \_\_\_\_\_ : (A) (B) (C) (D)  
 A. March 21<sup>st</sup> B. June 21<sup>st</sup> C. September 21<sup>st</sup> D. December 21<sup>st</sup>
44. On the Summer Solstice, the sun strikes 90° along the \_\_\_\_\_.  
 (A) Tropic of Cancer  
 (B) Tropic of Capricorn  
 (C) Tropic of Gemini  
 (D) Tropic of Aries
45. On the Winter Solstice, the sun strikes 90° along the \_\_\_\_\_.  
 (A) Tropic of Cancer  
 (B) Tropic of Capricorn  
 (C) Tropic of Gemini  
 (D) Tropic of Aries



Using the diagram below to answer questions #46-#53.

46. Summer occurs along point	(A) (B) (C) (D) (E) (F) (G) (H)
47. Winter occurs along point:	(A) (B) (C) (D) (E) (F) (G) (H)
48. Spring occurs along point:	(A) (B) (C) (D) (E) (F) (G) (H)
49. Fall occurs along point	(A) (B) (C) (D) (E) (F) (G) (H)
50. The summer solstice is located at point	(A) (B) (C) (D) (E) (F) (G) (H)
51. The winter solstice is located at point	(A) (B) (C) (D) (E) (F) (G) (H)
52. The autumnal equinox is located at point	(A) (B) (C) (D) (E) (F) (G) (H)
53. The vernal equinox is located at point	(A) (B) (C) (D) (E) (F) (G) (H)



## Oceanography TEST

Part 1: Earth's Oceans

The first understanding of the ocean's topography did not unfold until the historic three-and-a-half year voyage of the HMS *Challenger*. From December 1872 to May 1876, the *Challenger* expedition made the first – and perhaps still the most comprehensive – study of the global ocean ever attempted by one agency. The 127,500 kilometer trip took the ship and its crew of scientists to every ocean except the Arctic. Throughout the voyage, they sampled various ocean properties. They measured water depth by lowering a long, weighted line overboard. Today's technology – particularly sonar, satellites, and submersibles – allows scientists to study the ocean floor in a more efficient and precise manner than ever before.

Sonar (sound navigation and ranging) uses sound waves to measure the depth of the ocean at various locations. The data is collected by a boat as it travels over the ocean. Eventually, the data gathered by many boats is combined to form a complete picture of the area being studied. Traditionally, sonar was helpful because it was the first way scientists were able to measure the ocean. On the other hand, it is considered too slow and too expensive when studying a large area.

Satellites measure the topography of the ocean by bouncing microwaves off the ocean's surface. Since satellites are traveling in space around the Earth, they travel much faster than a ship can. Besides traveling faster, satellites can instantly gather data over large areas.

Finally, submersibles allow scientists to ride to the bottom of the ocean. Equipped with cameras, thermometers, pressure probes, and mechanical arms, scientists can gather data about the sediments, the organisms, and the water's properties at various depths of the ocean. Today, many submersibles can be controlled from the surface; consequently decreasing the risk of sending people down to the deep parts of the ocean.

1. What are the 4 major oceans on Earth?
  - (A) Atlantic, Pacific, Mediterranean, Arctic
  - (B) Atlantic, Pacific, Indian, Arctic
  - (C) Atlantic, Pacific, Mediterranean, Antarctic
  - (D) Atlantic, Pacific, Indian, Antarctic
2. Which ocean is the deepest and the largest?
  - (A) Atlantic
  - (B) Indian
  - (C) Pacific
  - (D) Arctic
3. According to sound wave data, the deepest part of the ocean is the Mariana's Trench in the Pacific Ocean. Which technology gathered this data?
  - (A) SONAR
  - (B) Submersibles
  - (C) Satellites
  - (D) Divers





4. In the late 1990s, Richard Ballard rode in *Argo* to locate the remains of the famous ocean liner, the *Titanic*. Which technology allowed Ballard to *get to* the remains?

- (A) SONAR
- (B) Submersibles
- (C) Satellites
- (D) Divers

5. According to microwaves, the mid-oceanic ridge winds through all ocean basins and is over 70,000 kilometers in length. Which technology gathered this data?

- (A) SONAR
- (B) Submersibles
- (C) Satellites
- (D) Divers

6. Which two technologies allow scientists to map the topography of the ocean?

- (A) SONAR
- (B) Submersibles
- (C) Satellites
- (D) Divers

7. Which technology would provide information on how the ocean changes on a daily basis, for example, tracking the movements of a hurricane across the Atlantic Ocean?

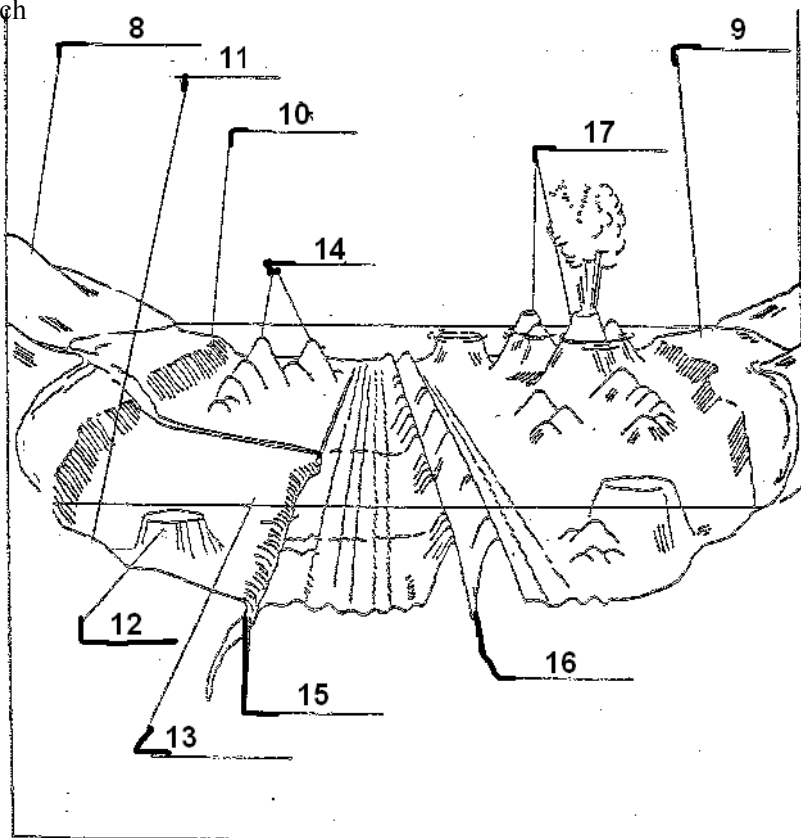
- (A) SONAR
- (B) Submersibles
- (C) Satellites
- (D) Divers



Part 2: Earth's Oceans Features

Use the following terms to label the picture. (#8-17)

- |                      |                      |                     |
|----------------------|----------------------|---------------------|
| a. abyssal plain     | e. continent         | h. continental rise |
| b. continental shelf | f. continental slope | i. islands          |
| c. guyot             | g. mid-oceanic ridge | j. seamount         |
| d. trench            |                      |                     |



- |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 8.  | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 9.  | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 10. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 11. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 12. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 13. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 14. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 15. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 16. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| 17. | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |



18. Which area is covered in coarse, continental sediments deposited when fast moving rivers empty into the ocean?
- (A) continental shelf
  - (B) continental slope
  - (C) continental rise
  - (D) abyssal plain
19. Which area is at the base of the continental slope and contains a mound of fine sediments?
- (A) continental shelf
  - (B) continental slope
  - (C) continental rise
  - (D) abyssal plain
20. Which area is not covered by sediments because it is too steep?
- (A) continental shelf
  - (B) continental slope
  - (C) continental rise
  - (D) abyssal plain
21. Which area is covered by fine sediments of minerals and remains of living things?
- (A) continental shelf
  - (B) continental slope
  - (C) continental rise
  - (D) abyssal plain
22. Convergent boundaries with subduction create \_\_\_ on the ocean floor.
- (A) guyots
  - (B) mid-oceanic ridges
  - (C) seamounts
  - (D) trenches
23. Divergent boundaries create new crust and \_\_\_ on the ocean floor.
- (A) guyots
  - (B) mid-oceanic ridges
  - (C) seamounts
  - (D) trenches



Part 3: The Ocean's Water

24. On average, ocean water is made of water, dissolved solids, and dissolved gases. Where do the dissolved solids and dissolved gases come from?

- (A) precipitation
- (B) magma creating new crust
- (C) runoff
- (D) seamounts
- (E) ALL OF THE ABOVE

25. Define salinity.

- (A) The amount of salt in the oceans
- (B) The amount of water in the oceans
- (C) The movement of currents in the ocean
- (D) The uneven heating of the ocean's waters

26. Off the coast of Tampa, Florida, there is a long period of rain from a tropical storm. What happens to the salinity level of the water off the coast of Tampa?

- (A) The salinity increases
- (B) The salinity decreases
- (C) The salinity stays the same
- (D) The salinity becomes zero

27. As a winter storm crossed the northern part of Alaska, the ocean water began to freeze. What happens to the salinity level of the ocean's water off the northern part of Alaska?

- (A) The salinity increases
- (B) The salinity decreases
- (C) The salinity stays the same
- (D) The salinity becomes zero

28. During the spring, there is a lot of runoff and discharge from the Mississippi River. What happens to the salinity of the ocean's water near the mouth of the Mississippi River?

- (A) The salinity increases
- (B) The salinity decreases
- (C) The salinity stays the same
- (D) The salinity becomes zero



Use the data below to answer questions #29 through #34.

On a recent trip, scientists gathered water samples off the coast of Alaska. Since density describes how closely packed the atoms are, it is calculated by dividing the samples mass by its volume. Complete their data table by matching the density (a, b, c) to the number in the table!

**USE THESE FOR # 29 - #31**

- a. 1.5 g/mL      b. 1.25 g/mL      c. 1.0 g/mL      d. 0.75 g/mL      e. 0.66 g/mL

Temperature	Volume (mL)	Mass (g)	Density (g/mL)
0°F	400	600	<b># 29</b> (A)   (B)   (C)   (D)   (E)
44°F	200	200	<b># 30</b> (A)   (B)   (C)   (D)   (E)
88°F	100	75	<b># 31</b> (A)   (B)   (C)   (D)   (E)

32. According to the scientists' data, as temperatures INCREASED, the density of the ocean water \_\_\_\_\_.
- (A) increases  
(B) decreases  
(C) stays the same
33. According to this data, where would you expect water to be *sinking deeper* into the ocean?
- (A) the Equator (0°)  
(B) the Tropic of Cancer (~23°N),  
(C) the Tropic of Capricorn (~23°S)  
(D) the polar regions (60°N and 60°S)?
34. According to this data, where would you expect water to be rising in the ocean?
- (A) the Equator (0°)  
(B) the Tropic of Cancer (~23°N),  
(C) the Tropic of Capricorn (~23°S)  
(D) the polar regions (60°N and 60°S)?

Movement in the Ocean

35. Define current.
- (A) the mass movement of water in the oceans  
(B) the mass movement of salt in the oceans  
(C) the daily rise and fall of earth's oceans  
(D) the twice monthly shift in the tidal range



36. What causes surface currents?  
 (A) global winds and density differences  
 (B) global winds and temperature differences  
 (C) global winds and the Coriolis Effect  
 (D) density differences and temperature differences
37. What causes deep currents?  
 (A) global winds and density differences  
 (B) global winds and temperature differences  
 (C) global winds and the Coriolis Effect  
 (D) density differences and temperature differences
38. Why are currents important to the ocean?  
 (A) They stir the ocean bringing the nutrients up to the living organisms.  
 (B) They cause high tides making it easier to sail.  
 (C) They cause hurricanes which bring freshwater into the ocean.  
 (D) They cause pollution to be “cleaned-up” faster.
39. Define tide.  
 (A) the mass movement of water in the oceans  
 (B) the mass movement of salt in the oceans  
 (C) the daily rise and fall of earth’s oceans  
 (D) the twice monthly shift in the tidal range

**Complete and use the following data table to answer questions #40 and #48.**

Day	High Tide	Low Tide	Tidal Range
1	8.40	4.70	<b>#40</b> (A) (B) (C) (D) (E)
2	7.83	<b>#41</b> (A) (B) (C) (D) (E)	3.40
3	7.50	4.20	3.30
4	7.46	4.66	2.80
5	7.33	5.13	2.20
6	7.00	5.10	1.90
7	6.82	6.47	<b>#42</b> (A) (B) (C) (D) (E)
8	6.90	<b>#43</b> (A) (B) (C) (D) (E)	0.50
9	6.95	6.25	0.70
10	5.95	4.55	1.40
11	5.68	3.68	<b>#44</b> (A) (B) (C) (D) (E)
12	5.40	2.50	2.90

**USE THESE FOR # 40 - #44**

- a. 6.40                      b. 4.43                      c. 3.70                      d. 2.00                      e. 0.35



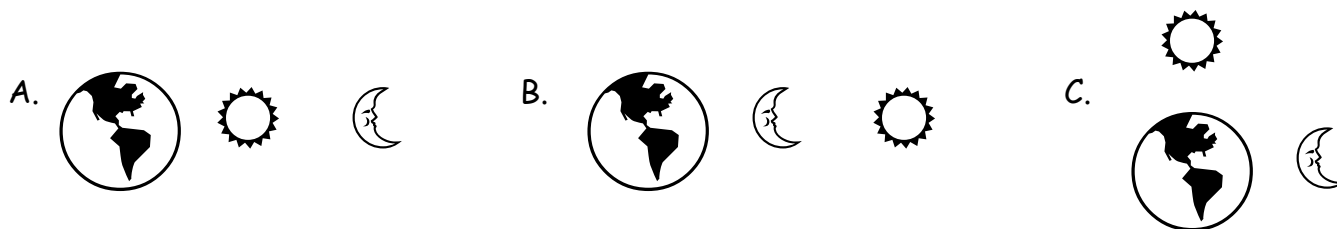
45. On which day did a spring tide occur?

- (A) Day 1
- (B) Day 4
- (C) Day 7
- (D) Day 12

46. On which day did a neap tide occur?

- (A) Day 1
- (B) Day 4
- (C) Day 7
- (D) Day 12

Use the following pictures to answer questions #47 and #48.

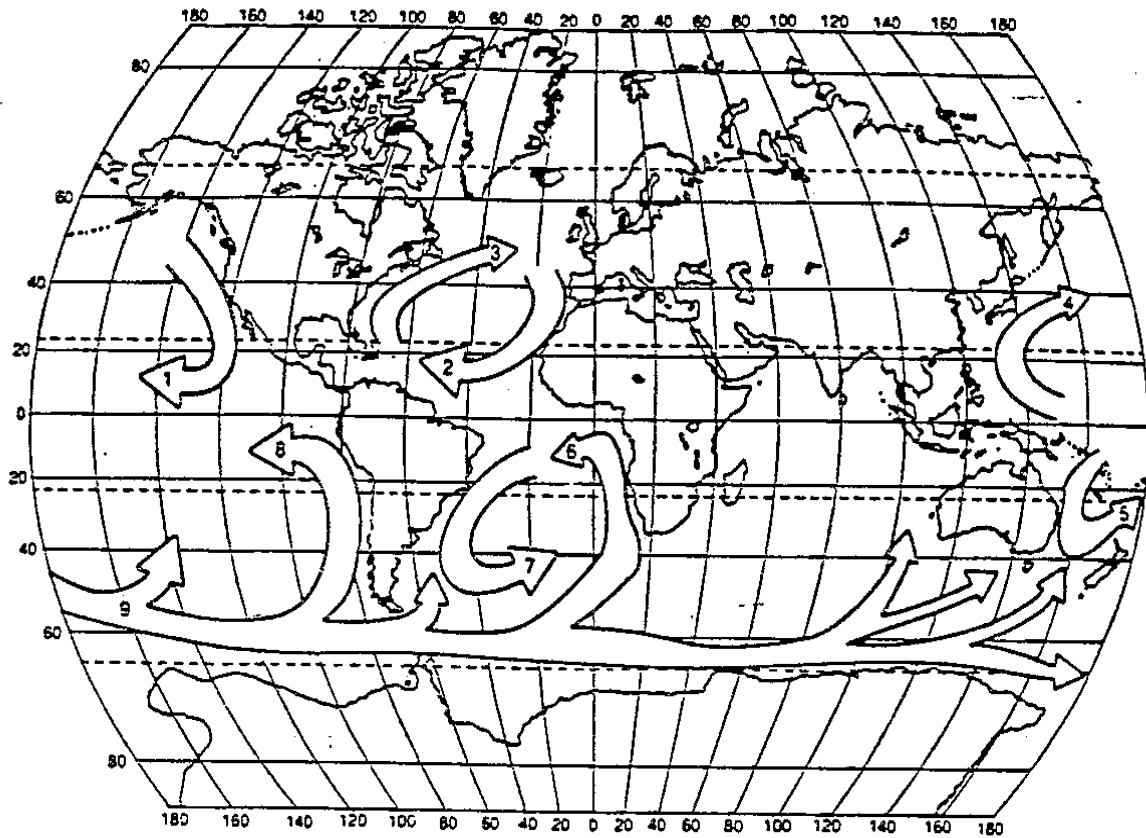


47. Which of the following shows the arrangement of the Sun-Moon-Earth during the spring tide? (A) (B) (C)

48. Which of the pictures shows the arrangement of the Sun-Moon-Earth during the neap tide? (A) (B) (C)



Use the following map to complete questions #49 through #53.



- 49. Color the California current YELLOW.
- 50. Color the Gulf Stream current GREEN.
- 51. Color the Canary current ORANGE.
- 52. Outline a warm current arrow RED.
- 53. Outline a cold current arrow BLUE.

- |                       |                       |
|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> |
| <input type="radio"/> | <input type="radio"/> |
| <input type="radio"/> | <input type="radio"/> |
| <input type="radio"/> | <input type="radio"/> |
| <input type="radio"/> | <input type="radio"/> |

Use a different arrow on the map for each question. No arrow should be colored twice.





Hurricanes (8 points)

54. Write a paragraph describing a hurricane; make sure you
- \*describe the wind speeds associated with a hurricane
  - \*discuss where hurricanes most often occur
  - \*discuss what current carries them to the United States
  - \*include and describe the terms eye, eye wall, and storm surge
  - \*include what causes the most deaths during a hurricane
  - \*include the most dangerous, damaging part of the hurricane

- ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Lined writing area consisting of multiple horizontal lines for text entry.



**Part 1: Parts of a River**

**Match each definition to the proper vocabulary term. Each term will be used ONCE OR NOT AT ALL.**

- A. bank      B. bed      C. delta      D. discharge      E. head      F. mouth  
 G. natural levee      H. river systems      I. stream load      J. watershed

1. The part of the stream channel that is below water is the ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
2. The main channel, all the feeder streams, and the watershed make up a(n) ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
3. The materials carried by the water are the ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
4. The volume of water moved by a stream in a given time is the ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
5. The highest elevation of a river is at its ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
6. The lowest elevation of a river is at its ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
7. A fan shaped deposit at the end of a stream is a(n) ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
8. Course sediments in the stream load pile up along the bank creating ____	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
9. The edge of the stream channel that is above water is the ____	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
10. The area that is drained by a river is the river's ____.	(A) (B) (C) (D) (E) (F) (G) (H) (I) (J)



**Part 2: Which river stage???**

Use the following choices to categorize each example. **Choices may be used MANY TIMES.**

**A. youthful rivers**

**B. mature rivers**

**C. all rivers**

11. Have wide, flat floodplains covered in sediments deposited during previous floods	(A) (B) (C)
12. May have rapids and waterfalls due their steep gradient	(A) (B) (C)
13. Move by the force of gravity	(A) (B) (C)
14. Are the most effective at draining the watershed due to their many tributaries	(A) (B) (C)
15. Are eroding their beds, which forms a “V-shaped” channel and a deep valley	(A) (B) (C)
16. Have meanders and ox bow lakes	(A) (B) (C)
17. Are eroding their banks, which forms a “flat-bottomed” channel with a low gradient	(A) (B) (C)
18. Run from an area of higher elevation to an area of lower elevation.	(A) (B) (C)

**Part 3 – Continental Glaciers**

Use the following **WORD BANK** to answer questions #19 through #25.

a. drumlin	b. erratics	c. eskers	d. ground moraine	e. kettles	f. outwash plain	g. terminal moraine
19. Low teardrop-shaped hills of unsorted sediments.						
(A) (B) (C) (D) (E) (F) (G)						
20. Hill of unsorted sediments that was pushed in front of the glacier.						
(A) (B) (C) (D) (E) (F) (G)						
21. A snake-like pile of sorted sediments that was formed by the meltwaters of the glacier.						
(A) (B) (C) (D) (E) (F) (G)						
22. Large boulders carried far from where they are currently located.						
(A) (B) (C) (D) (E) (F) (G)						
23. A covering of unsorted sediments that formed as the glacier <i>ground</i> over the land.						
(A) (B) (C) (D) (E) (F) (G)						
24. Depressions that formed when a chunk of ice was broke off from the glacier.						
(A) (B) (C) (D) (E) (F) (G)						
25. Area in out in front of the glacier that is eroded, washed and shaped by running water as the glacier melts and retreats.						
(A) (B) (C) (D) (E) (F) (G)						



**Part 4: The Ice Ages**

For questions #26 through #28, use the map below that shows the **terminal moraines** of four major stages of continental glaciation in the central United States.

26. During which ice age was current-day Illinois almost totally covered by ice?

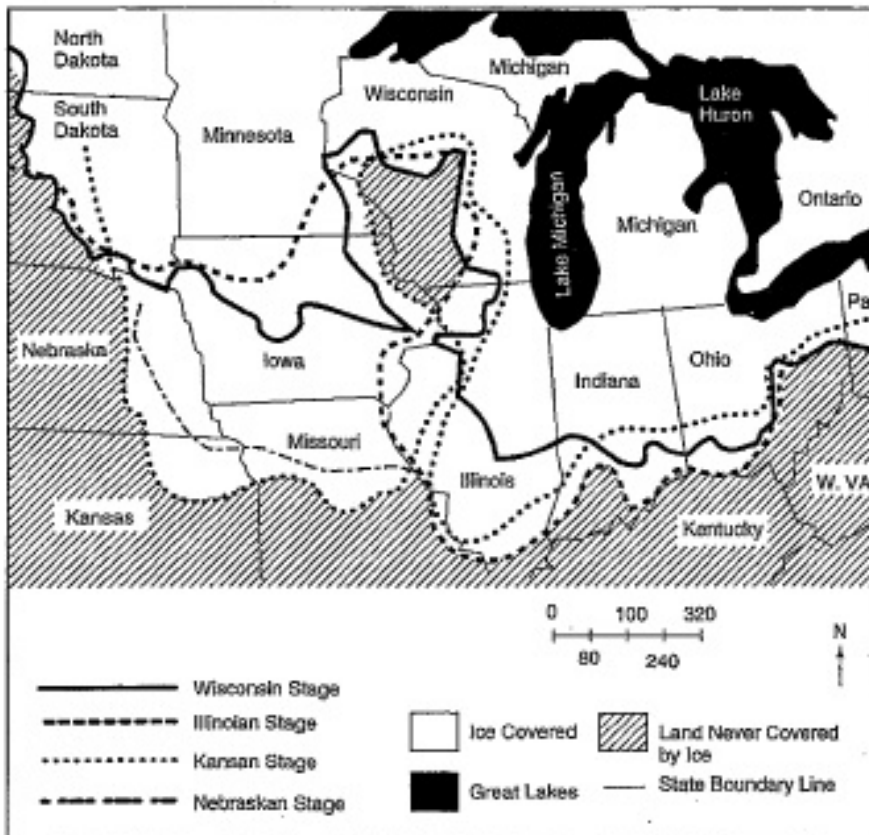
- a. Wisconsin      b Illinoian      c Kansan      d Nebraskan      (A) (B) (C) (D)

27. Which 2 states experienced all four major ice ages? (2 points) **\*\*\*PICK 2\*\*\***

- a Minnesota      b Missouri      c Ohio      d Iowa      (A) (B) (C) (D)

28. What “evidence” would geologists **NOT** look for to claim that glaciers never covered the central part of Wisconsin?

- a Drumlins      b Erratics      c Moraines      d Meanders      (A) (B) (C) (D)



**Part 5 – Parts of a River.** For questions #29-#35, complete the following on the diagram called “A Typical River System”.

- |                                                  |                       |                       |
|--------------------------------------------------|-----------------------|-----------------------|
| 29. Outline the delta in BROWN                   | <input type="radio"/> | <input type="radio"/> |
| 30. Strip the floodplain in BLUE.                | <input type="radio"/> | <input type="radio"/> |
| 31. Color the oxbow lake GREEN.                  | <input type="radio"/> | <input type="radio"/> |
| 32. Color the tributary ORANGE.                  | <input type="radio"/> | <input type="radio"/> |
| 33. Outline a meander in PURPLE.                 | <input type="radio"/> | <input type="radio"/> |
| 34. Draw a YELLOW fish nearest the river’s head. | <input type="radio"/> | <input type="radio"/> |
| 35. Draw a RED boat nearest the river’s mouth.   | <input type="radio"/> | <input type="radio"/> |

