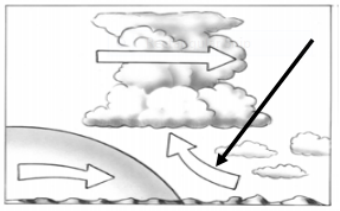
socrative

AC Meteorology Summative Assessment 2017 Score:

1. **Which type of AIR is the dark arrow pointing at?**



(A) Warm air
(B) Stationary air
(C) occluded air
(D) cold air

2. **The process by which gases in the atmosphere absorb radiation from the sun and converts it into heat to warm earth's surface is called:**

(A) the thermal effect
(B) the greenhouse effect
(C) global warming
(D) radiation balance

3. **What generally causes differences in air pressure on Earth?**

(A) wind patterns
(B) unequal heating of the planet
(C) the shape of the planet
(D) denser air near the equator

4. **A storm surge is a dangerous part of**

(A) A tornado
(B) a thunderstorm
(C) the water cycle
(D) a hurricane

5. **What tool measures air pressure?**

(A) thermometer
(B) psychrometer
(C) anemometer
(D) barometer

6. **Which statement is most accurate?**

A warm air rises because it is heavier

B warm air sinks because it is heavier

C cold air rises because it is heavier

D cold air sinks because it is heavier

7. **Which climate zone is Atlanta, Georgia found in?**

A Polar

B Temperate

C Tropical

D Thermal

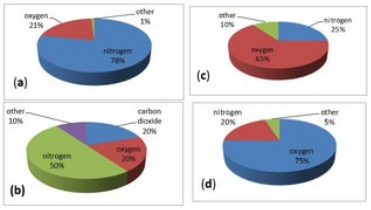
8. **Which pie chart in the photo depicts the correct composition of our atmosphere?**

A A

B B

C C

D D



9. **What type of heat transfer occurs when two items TOUCH?**

A convection

B conduction

C radiation

D evaporation

10. **Why is it colder in Denver, Colorado than in Atlanta, Georgia? (See Map)**

A Denver has more mountains and is farther away from the equator.

B Atlanta is farther north and has a gentle sea breeze.

C Denver is close to the equator and has a prevailing wind from the Gulf of Mexico.

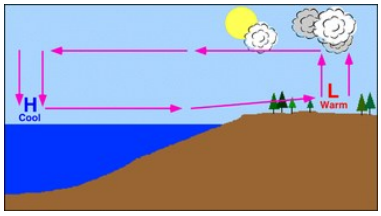
D Atlanta and Denver are both in the midwest, so there is really no reason for the difference.

11. **Earth would have MORE craters if we did not have an atmosphere.**

A True

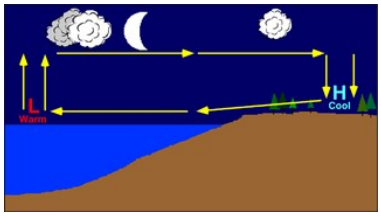
B False

12. What type of breeze is depicted in the photo?



A) sea breeze
B) land breeze
C) monsoon
D) jet stream

13. What type of breeze is depicted in the photo?



A) land breeze
B) sea breeze
C) jet stream
D) prevailing westerly

14. Winds always blow from an area of _____ pressure to an area of _____ pressure.

A) high, high
B) low, high
C) high, low
D) low, low

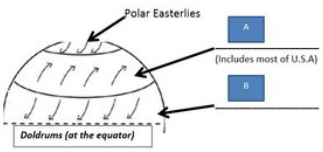
15. Which global wind pattern is Atlanta, Georgia in?

A) Polar easterlies
B) Prevailing westerlies
C) Tropical westerlies
D) Trade winds

16. What causes winds?

A) Air pollution
B) Differences in temperature and air pressure
C) The moon's gravity
D) Friction

17. Identify the winds in the diagram.



A) A-Westerlies, B-Polar Easterlies
B) A-Trade Winds, B-Westerlies
C) A-Trade Winds, B-Doldrums
D) A-Westerlies, B-Trade Winds

18. What type of air mass would be warm and humid?

A maritime polar

B maritime tropical

C continental polar

D continental tropical

19. What type of air mass form over CENTRAL CANADA?

A maritime polar

B maritime tropical

C continental polar

D continental tropical

20. In the picture, what type of front is approaching GA?

A cold front

B warm front

C occluded front

D stationary front

21. Water takes longer to heat up than land

A True

B False

22. Heat travels from the sun in the form of infrared rays.

A conduction

B convection

C radiation

D evaporation

23. Heat transfer through a liquid or a gas; creates currents of rising warmer particles and sinking colder particles.

A) conduction

B) convection

C) radiation

D) evaporation

24. At the top of a mountain, how do temperature and pressure compare to the bottom of the mountain?

A) both would be lower

B) both would be higher

C) temperature would be lower, pressure would be higher

D) temperature would be higher, pressure would be lower

25. If there is a tornado WARNING issued to your area, you should

A) go shopping for supplies.

B) cover your windows with plywood.

C) go to a room with no windows.

D) find a high place to stay.

26. Which photo depicts the area of the country known as "tornado alley?"

A) photo A

B) photo B

C) photo C

D) photo D

A

B

C.

D.

27. In order to be considered a "severe thunderstorm," what must it contain?

A) hail, snow, or sleet

B) tornado, hail, or high winds

C) tornado, snow, or storm surges

D) heavy rains, high winds, or storm surges

28. What type of front often brings showers and thunderstorms (and sometimes tornadoes) into an area?

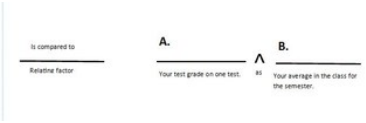
A) cold front

B) warm front

C) occluded front

D) stationary front

29. See the bridge map and choose the items that would best fit in A and B.



A) A=weather, B=wind

B) A=climate, B=weather

C) A=weather, B=climate

D) A=climate, B=current

30. A severe storm (on land) that forms from a rapidly rotating/spinning funnel cloud is a

A) tornado

B) blizzard

C) hurricane

D) thunderstorm

31. Where are hurricanes most likely to form?

A) above tropical land masses

B) above tropical oceans near the equator

C) above polar land masses

D) above temperate oceans

32. What type of precipitation is more common?

A) Rain

B) Snow

C) Sleet

D) Hail

E) Freezing Rain

33. Cold air has _____ pressure because it is _____ dense.

A) Low, more

B) Low, less

C) High, more

D) High, less

34. What type of front is in the picture if shown on a weather map?

A Cold
B Warm
C Occluded
D Stationary
E Tropical

35. What type of front is in the picture if shown on a weather map?

A Cold
B Warm
C Occluded
D Stationary
E Tropical

36. What type of pressure is needed in order for a severe storm to form?

A High
B Low
C It does not matter, storms can form in any type of pressure

37. What is a way that the atmosphere does NOT directly help us?

A We would not have air without the atmosphere
B We would not have sunlight without the atmosphere
C It protects us from harmful UV Rays
D We would not be insulated without the atmosphere

38. How does the Coriolis Effect influence winds?

A It causes winds
B It causes winds to rotate depending on where you are on the Earth
C It makes them go in a straight line
D It makes the winds weaker and unpredictable

39. What are the three climate zones of the Earth?

A Polar, Tropical, Temperate
B Maritime, Polar, Continental
C Cold, Warm, Occluded
D Tropical, Cold, Stationary

40. If the Greenhouse Effect happens too much, it could lead to what phenomenon?

A) Cooling temperatures

B) Pollution

C) Increase in livestock

D) Global Warming

41. A moving tropical air mass will form a

A) cold front

B) warm front

C) hurricane

D) tornadoes

42. What kind of weather would you expect after a cold front passes?

A) warm temperatures

B) cool temperatures

C) light rain

D) tornadoes

43. This is associated with slow, rising air with blanket-like clouds and light precipitation

A) High pressure system

B) low pressure system

C) cold front

D) warm front

44. This is caused by cool, sinking air

A) High pressure system

B) Low pressure system

C) Cold front

D) Warm front

45. Why is air pressure greatest at the Earth's surface?

A) due to the pressure of oxygen

B) gravity pulls gas molecules toward the surface

C) because of the weight of ice crystals

D) because of pollution

46. What is the atmosphere?

A) The air we breathe

B) A mixture of gases

C) Mostly oxygen

D) Carbon Dioxide

47. Which of the following statements correctly describes how Earth's atmosphere is heated?

A) The sun heats the air through convection.

B) The sun heats the air through radiation.

C) The sun heats the ground through radiation. The ground heats the air through convection.

D) The sun heats the ground through convection. The ground heats the air through radiation.

48. The protective ozone layer is found in the _____

A) thermosphere

B) mesosphere

C) troposphere

D) stratosphere

49. Auroras are caused by electrically charged particles in the

A) mesosphere

B) troposphere

C) hemisphere

D) ionosphere

50. Where are the doldrums located and what are they?

A) At the poles, and they are areas of little to no wind.

B) Between 60 and 30 degrees latitude, and they come from the east.

C) At the equator, and they are areas of little to no wind.

D) Between 30 degrees and the equator, and they come from the west.