CLASS: XI	GEOGRAPHY
DATE:28/10/21	CH: 10 **SELF ASSESSMENT WORKSHEET** ATMOSPHERIC CIRCULATION AND WEATHER SYSTEMS

1. What is the use of mercury barometer or the aneroid barometer?
A. To measure wind direction
B. To measure wind velocity
C. To measure atmospheric pressure
D. To measure humidity

2. Assertion: The atmospheric pressure decreases with height.
Reason: Due to gravity the air at the surface is denser and hence has higher pressure.
A. A and R both true, and R is the correct explanation of A.
B. A and R both true, and R is the not correct explanation of A.
C. A is true and R is false.
D. R is false and R is true.

3. At which of the following places the atmospheric pressure is the highest?
A. At high mountain B. At ocean surface C. both A and B have same pressure D. Neither A nor B

4. If the atmospheric pressure at the sea level is 1013 mb, what may be the pressure at 5km altitude?
A. 1513 mb B. 963 mb C.513 mb D. 1013 mb

5. Statement 1: The pressure gradient is strong where the isobars are close to each other.
Statement 2: Over the sea surface the friction of wind is maximum.
A. 1 is correct B. 2 is correct C. Both 1 and 2 are correct D. Both 1 and 2 are incorrect

6. Identify the incorrect pair

A. Equator	ITCZ
B. Sub -Tropical High Pressure Belt	45^0 N and S
C. Sub Polar Low Pressure Belt	60^0 N and S
D. Westerlies	30^0 to 60^0 N and S

7. The wind at the surface of the Ferrell's cell is……. (Fill in the blanks)
A. Trade winds B. Easterlies C. Westerlies D. Polar easterlies

8. Which of the following shows the location of Hadley's cell?
A. 0^0 to 30^0 N and S B. 30^0 to $60\ ^0$N and S C. 60^0 to 90^0 N and S D. 30^0 to $45\ ^0$N and S

8. Coriolis's force is responsible for…… (Fill in the blanks)
A. Deflection of wind
B. Circulation of air
C. speed of wind
D. All of the above

9. Which of the following phenomena can be observed in day time
i. wind blows from the sea to the land as the sea breeze
ii. pressure gradient is from the land to the sea
iii. pressure gradient from sea to land is created
iv. wind blows from the land to the sea as the sea breeze
A. I and iii B. ii and iv C. I and iv D. ii and iii

10. When the air remains over a homogenous area for a sufficiently longer time, it acquires the characteristics of the area. Identify the wind
A. Local wind B. Seasonal wind C. Land breeze D. Air mass

11. At equator, wind blows perpendicular to the isobars. This is because,

A. its is a region of low pressure

B. The wind velocity is high

C. Coriolis's force is not affective

D. Rotation of earth is maximum

General Atmospheric Circulation and its Effects on Oceans Warming and cooling of the Pacific Ocean is most important in terms of general atmospheric circulation. The warm water of the central Pacific Ocean slowly drifts towards South American coast and replaces the cool Peruvian current. Such appearance of warm water off the coast of Peru is known as the El Nino. The El Nino event is closely associated with the pressure changes in the Central Pacific and Australia. This change in pressure. condition over Pacific is known as the southern oscillation. The combined phenomenon of southern oscillation and El Nino is known as ENSO. In the years when the ENSO is strong, large-scale variations in weather occur over the world. The arid west coast of South America receives heavy rainfall, drought occurs in Australia and sometimes in India and floods in China. This phenomenon is closely monitored and is used for long range forecasting in major parts of the world.

12.. El Nino is observed in the coast of

A. Peru B. South American C. Australia D. China

13. Recently the arid west coast of South America receives heavy rainfall, this is due to

A. El Nino effect B. Southern Oscillation C. ENSO D. All of the above

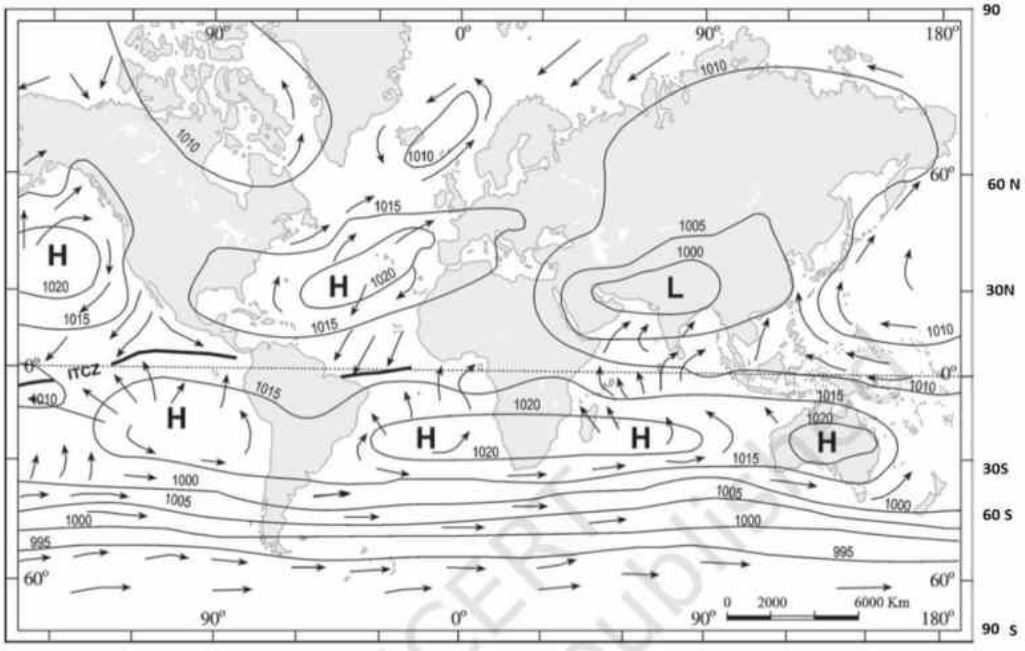
14. Southern oscillation means

A. Changes in pressure condition in Pacific Ocean

B. Variations in weather conditions

C. Warming and cooling of Pacific Ocean

D. Changes in climatic condition



Distribution of pressure (in millibars) — July

13.

Identify the region of lowest atmospheric pressure in Northern hemisphere

A. Northern Canada B. Arctic Ocean C. Northern India D. North Pacific Ocean

14. In which latitude the wind direction is perpendicular to the isobars?

A. 60^0 S B. 60^0 N C. 0^0 D. 30^0 S

15. What is the wind direction experienced in India?

A. North East B. North west C. South east D. South West

16. Coriolis force is directly proportional to the angle of latitude, is maximum at the-----I------ and is absent at the-------II----------. (Fill in the blanks) equator poles

A. i- equator, ii- poles
B. i- poles, ii- equator
C. I - Mid latitude, ii – equator
D. I – poles, ii – Mid Latitude

Tropical cyclones are violent storms that originate over oceans in tropical areas and move over to the coastal areas bringing about largescale destruction caused by violent winds, very heavy rainfall and storm surges.

This is one of the most devastating natural calamities. They are known as *Cyclones* in the Indian Ocean, *Hurricanes* in the Atlantic, *Typhoons* in the Western Pacific and South China Sea, and *Willy-willies* in the Western Australia.

Tropical cyclones originate and intensify over warm tropical oceans. The conditions favourable for the formation and intensification of tropical storms are: (i) Large sea surface with temperature higher than 27° C; (ii) Presence of the Coriolis force; (iii) Small variations in the vertical wind speed; (iv) A pre-existing weak low- pressure area or low-level-cyclonic circulation; (v) Upper divergence above the sea level system.

17. Where do the tropical cyclones originate?

A. Over the continent
B. Over the ocean
C. Over the continents in Tropical region
D. Over the ocean in Tropical region

18. What is Tropical cyclone in Western Australia is known as?

A. Typhoons B. Hurricanes C. Cyclones D. Willy-willies

19. At what temperature of the sea surface, tropical cyclone may originate?

A. Above 30^0 C B. Above 20^0 C C. Above 27^0 C D. Above 25^0 C

20. From severe thunderstorms sometimes spiraling wind descends like a trunk of an elephant with great force, with very low pressure at the centre, causing massive destruction on its way.

Identify the wind

A. Tornadoes B. Cyclone C. Anticyclone D. Hurricane

SUBJECTIVE QUESTIONS

1. What are the geostrophic winds?
2. Discuss the factors affecting the speed and direction of wind.
3. Explain the phenomena of land breeze and sea breeze.