



Pimpri Chinchwad Education Trust's  
**S.B. PATIL COLLEGE OF SCIENCE & COMMERCE, RAVET**

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**STD: 11<sup>th</sup> Science**  
**Annual Exam [2020-21]**

**Subject: Geography**

**Marks:80**  
**Time: 3.00Hrs**

**Q. 1. A) Complete the chain .**

**(5 M)**

A	B	C
1) Boreal forest	1) Hardwood species of trees	1) Siberia
2) Deserts	2) Tropical deciduous forest	2) Myanmar
3) Teak	3) Wide spectrum of biodiversity	3) Sahara Desert
4) Tropical rainforest	4) Tundra Region	4) Brazil
5) Mosses & lichens	5) Taiga forest	5) Greenland
	6) Narrow spectrum of biodiversity	

**Q. 1. B) Choose the correct alternatives**

**(5 M)**

- The region with high diurnal range of temperature .....  
 a) Tropical rainforests                      b) Tropical grasslands  
 c) Tropical desert regions                      d) Tropical Monsoon regions
- In Africa tropical evergreen forest is predominantly found in .....  
 a) Amazon basin      b) Sahara desert      c) Congo basin      d) Savanna
- Lumbering flourished as an occupation from the Newfoundland to Alaska in North America because .....  
 a) Tundra Climatic Region                      b) Taiga Climatic Region  
 C) West European Climatic Region                      d) Monsoon region
- This landform develops due to depositional work of wind. The windward slope of this landform is gentle.  
 a) Loess plains      b) barchans                      c) Seif                      d) Sand hills
- Sometimes, the river starts erosion upstream. This happens when the head stream gets a lot of water in the early stages of river's flow.  
 a) Down cutting      b) Headward erosion      c) Lateral erosion      d) Vertical erosion

**Q. 1. C)**

**(2 M)**

- Arrange the following biomes in proper order from Equator to pole.  
 a) Tundra                      b) Tropical rainforest      c) Boreal forest                      d) Sahara Desert
- Arrange the following Marine biomes from the lower to the uppermost level.  
 a) Aphotic layer      b) Darkest layer                      c) Euphotic layer                      d) Disphotic layer

**Q. 1. D) Complete the table****(3 M)**

Regions	Climate	Animals & vegetation
Equatorial rainforest region		
Tundra region		
Tropical savanna type of climate		

**Q. 1. E ) Choose the correct alternatives****(3 M)**

- Mining, blasting of hills are a type of ..... weathering.  
a) Physical    b) Chemical    c) anthropogenic
- The Indonesian Tsunami of 2004 is.....  
a) meteorological disaster    b) tectonic disaster    c) geological disaster
- Action taken to reduce or avoid disasters & their effects is.....  
a) mitigation    b) rehabilitation    c) disaster preparedness

**Q. 1. F) Write a note on the following concept. (any 2)****(2 M)**

- Capacity to cope
- Disaster & Hazards
- Plucking

**Q. 2. Give Geographical reasons. ( any 4)****(12 M)**

- Slope is a major factor in mass wasting.
- Karst landforms are seen concealed under the surface o
- The diurnal range of temperature is more in desert areas.
- Desert biomes have thorny vegetation. .
- Lumbering activity has developed in Taiga forests.

**Q. 3. Distinguish between: (any 3)****(9 M)**

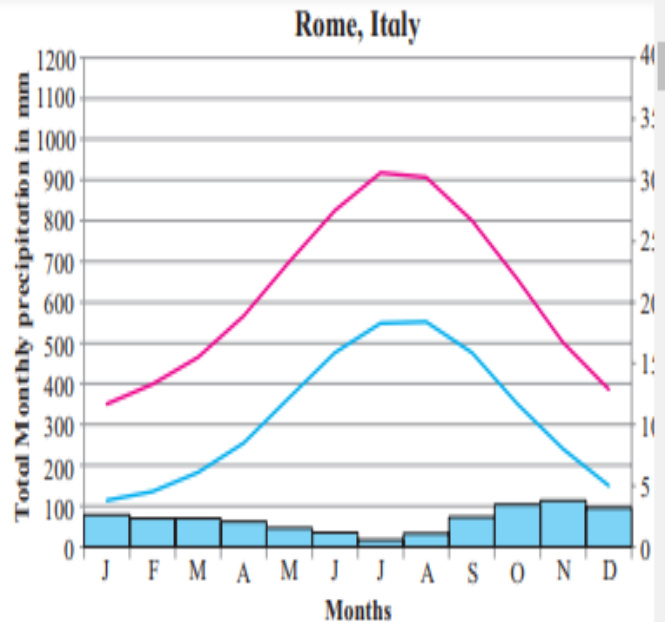
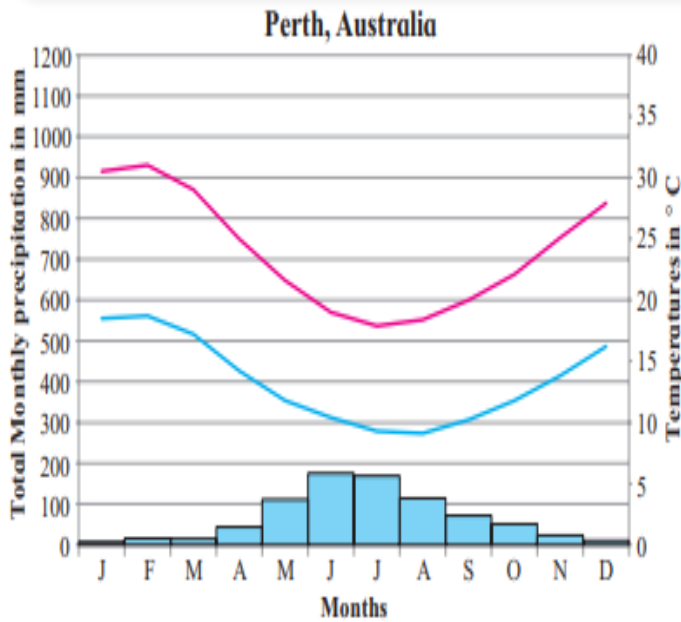
- Biome and ecosystem
- Stalactite and stalagmite
- Slow movements and sudden movements
- Attrition and Abrasion

**Q. 4. A) Mark & name the following in the world physical map with a suitable index (any 6 ) (6M)**

- Chile & Russia
- Highland climatic region in India
- Tundra region
- Taiga biomes
- Equatorial rainforest region
- Kilimanjaro
- Eurasian plate

Q. 4. B) Read the graphs and answer the following questions.

(5M)



- Name the months of highest rainfall.
- Name the months of lowest temperatures.
- What could be the factors which influence the climate of these places?
- Are the months of rainfall the same in both the places? If not, why?
- Write a concluding statement about the climate of both the places

Q. 5. Write short notes. (any 3)

(12M)

- Rehabilitation after an earthquake.
- Tropical rainforest biome.
- Types of Weathering
- Carbonation

Q. 6. A) Read the paragraph & answer the questions.

(4M)

### Tropical cyclone

**Tropical cyclone**, also called a typhoon or **hurricane**, is an intense circular storm that originates over warm tropical oceans and is characterized by low atmospheric pressure, high winds, and heavy rain. Drawing energy from the sea surface and maintaining its strength as long as it remains over warm water, a tropical cyclone generates winds that exceed 119 km (74 miles) per hour. In extreme cases winds may exceed 240 km (150 miles) per hour, and gusts may surpass 320 km (200 miles) per hour. Accompanying these strong winds are torrential rains and a devastating phenomenon known as the storm surge, an elevation of the sea surface that can reach 6 metres (20 feet) above normal levels. Such a combination of high winds and water makes cyclones a serious hazard for coastal areas in tropical and subtropical areas of the world. Every year during the late summer months (July–September in the Northern Hemisphere and January–March in the Southern Hemisphere), cyclones strike regions as far apart as the Gulf Coast of North America, northwestern Australia, and eastern India and Bangladesh.

Tropical cyclones are known by various names in different parts of the world. In the North Atlantic Ocean and the eastern North Pacific they are called hurricanes, and in the western North Pacific around the

Philippines, Japan, and China the storms are referred to as typhoons. In the western South Pacific and Indian Ocean they are variously referred to as severe tropical cyclones, tropical cyclones, or simply cyclones. All these different names refer to the same type of storm.

A characteristic feature of tropical cyclones is the eye, a central region of clear skies, warm temperatures, and low atmospheric pressure. Typically, atmospheric pressure at the surface of Earth is about 1,000 millibars. At the centre of a tropical cyclone, however, it is typically around 960 millibars, and in a very intense “super typhoon” of the western Pacific it may be as low as 880 millibars. In addition to low pressure at the centre, there is also a rapid variation of pressure across the storm, with most of the variation occurring near the centre. This rapid variation results in a large pressure gradient force, which is responsible for the strong winds present in the eyewall (described below). Horizontal winds within the eye, on the other hand, are light. In addition, there is a weak sinking motion, or subsidence, as air is pulled into the eyewall at the surface. As the air subsides, it compresses slightly and warms, so that temperatures at the centre of a tropical cyclone are some 5.5 °C (10 °F) higher than in other regions of the storm. Because warmer air can hold more moisture before condensation occurs, the eye of the cyclone is generally free of clouds. Reports of the air inside the eye being “oppressive” or “sultry” are most likely a psychological response to the rapid change from high winds and rain in the eyewall to calm conditions in the eye.

### **The eyewall**

The most dangerous and destructive part of a tropical cyclone is the eyewall. Here winds are strongest, rainfall is heaviest, and deep convective clouds rise from close to Earth’s surface to a height of 15,000 metres (49,000 feet). As noted above, the high winds are driven by rapid changes in atmospheric pressure near the eye, which creates a large pressure gradient force. Winds actually reach their greatest speed at an altitude of about 300 metres (1,000 feet) above the surface. Closer to the surface they are slowed by friction, and higher than 300 metres they are weakened by a slackening of the horizontal pressure gradient force. This slackening is related to the temperature structure of the storm. Air is warmer in the core of a tropical cyclone, and this higher temperature causes atmospheric pressure in the centre to decrease at a slower rate with height than occurs in the surrounding atmosphere. The lessened contrast in atmospheric pressure with altitude causes the horizontal pressure gradient to weaken with height, which in turn results in a decrease in wind speed. Friction at the surface, in addition to lowering wind speeds, causes the wind to turn inward toward the area of lowest pressure. Air flowing into the low-pressure eye cools by expansion and in turn extracts heat and water vapour from the sea surface. Areas of maximum heating have the strongest updrafts, and the eyewall exhibits the greatest vertical wind speeds in the storm—up to 5 to 10 metres (16.5 to 33 feet) per second, or 18 to 36 km (11 to 22 miles) per hour. While such velocities are much less than those of the horizontal winds, updrafts are vital to the existence of the towering convective clouds embedded in the eyewall. Much of the heavy rainfall associated with tropical cyclones comes from these clouds. The upward movement of air in the eyewall also causes the eye to be wider aloft than at the surface. As the air spirals upward it conserves its angular momentum, which depends on the distance from the centre of the cyclone and on the wind speed around the centre. Since the wind speed decreases with height, the air must move farther from the centre of the storm as it rises. When updrafts reach the stable tropopause (the upper boundary of the troposphere, some 16 km [10 miles] above the surface), the air flows outward. The Coriolis force deflects this outward flow, creating a broad anticyclonic circulation aloft. Therefore, horizontal circulation in the upper levels of a tropical cyclone is opposite to that near the surface.

1. What is the tropical cyclone?
2. Explain the concept of Eyewall.
3. Write the different names of tropical cyclones in different areas.
4. Name the latest cyclone name which form arabian coastal region in 2021.

**Q. 6. B Draw neat and labelled diagrams. (any 2)**

**(4 M)**

1. Mushroom rocks                      2. Drilling                      3. Block disintegration

**Q. 7. Write the answer in detail. (any 1)**

**(8 M)**

1. Give an account of the desert biome with the help of following points :  
a) location                      b) plant life                      c) animal life                      d) human life.
2. Write about the Tropical monsoon climatic region & taiga region in detail.
3. Which landforms are formed as erosion work of wind? Explain in detail with the help of diagrams.

----- ALL THE BEST -----