Physical Geography Questions for CDS Exam

Physical Geography Quiz 3

Direction : Study the following question carefully and choose the right answer.

1. The natural disaster in which carbon-di-oxide suddenly erupts from a deep lake water is known as _____ .

A. Lacaustrine B. Fluvial C. Glacial D. Liminic

2. Which one of the following does NOT remain to be a planet now?

A. Neptune B. Uranus C. Pluto D. Venus

3. Which of the following planets has the maximum number of natural satellites?

A. Earth B. Mars C. Jupiter D. Saturn

4. Which of the following is referred to as 'Young Fold Mountains'?

A. Aravallis B. Nilgiris C. Himalayas D. Vindhyas

5. Lack of atmosphere around the moon is due to

A. Low escape velocity of air molecule and low gravitational attraction

B. High escape velocity of air molecule and low gravitational attraction

C. Low Gravitational attraction only

D. High escape velocity of air molecule only

6. Why do we have a leap year every four years?

A. The Earth gets shifted out of orbit every four years

B. The revolution slows down a little once every four years

C. The length of a year is not an integer number of days

D. It is a convention

7. There are three distinct characters of temperature stratification of atmosphere around the Earth, Which one among the following is the correct arrangement of the layers (from the Earth's surface upwards)?

A. Thermosphere - Stratosphere - Troposphere

B. Troposphere - Thermosphere - Stratosphere

C. Troposphere - Stratosphere - Thermosphere

D. Thermosphere -Troposphere - Stratosphere

8. Ozone holes are more pronounced at the

A. Equator B. Tropic of Cancer C. Tropic of Capricorn D. Poles

9. The following questions consist of two statements, Statement I and Statement II.

Statement I: Comets revolve around the Sun only in long elliptical orbits.

Statement II: A comet develops a tail when it gets close to the Sun.

A. Both the statements are individually true and Statement II is the correct explanation of Statement I

B. Both the statements are individually true but Statement II is not the correct explanation of Statement I

C. Statement I is true, but Statement II is false

D. Statement I is false, but Statement II is true

10. The following questions consist of two statements, Statement I and Statement II.

Statement I: The planet Neptune appear blue in colour.

Statement II: The presence of methane gas in the atmosphere of Neptune is responsible for its colour.

A. Both the statements are individually true and Statement II is the correct explanation of Statement I

B. Both the statements are individually true but Statement II is not the correct explanation of Statement I

C. Statement I is true, but Statement II is false

D. Statement I is false, but Statement II is true

Correct Answers:

1	2	3	4	5	6	7	8	9	10
D	C	C	C	A	D	C	D	B	A

Explanations:

1.

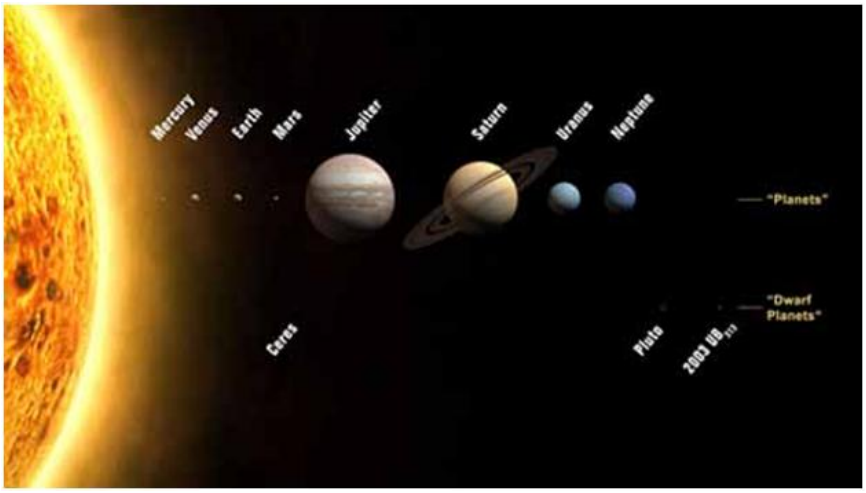
A **limnic** Eruption is also known as a lake overturns. It is a rare type of natural disaster in which dissolved carbon dioxide (CO2) suddenly erupts from deep lake water, suffocating wildlife, livestock and humans. Such an eruption may also cause tsunamis in the lake as the rising CO2 displaces water. Scientists believe earthquakes, volcanic activity, or explosions can trigger such an eruption. Lakes in which such activity occurs may be known as limnically active lakes or exploding lakes. Some features of limnically active lakes include:

1. CO2-saturated incoming water
2. A cool lake bottom indicating an absence of direct volcanic interaction with lake waters
3. An upper and lower thermal layer with differing CO2 saturations
4. Proximity to areas with volcanic activity

Scientists have recently determined, from investigations into the mass casualties in the 1980s at Lake Monoun and Lake Nyos, that although limnic eruptions can be indirectly related to volcanic eruptions, they are actually separate types of disaster events.

2.

Pluto is a dwarf planet in the Kuiper belt, a ring of bodies beyond Neptune. It was the first Kuiper belt object to be discovered. It is the largest and second-most-massive known dwarf planet in the Solar System and the ninth-largest and tenth-most-massive known object directly orbiting the Sun. It is the largest known trans-Neptunian object by volume but is less massive than Eris, a dwarf planet in the scattered disc. this dwarf planet is not consider as planet in the solar system.



3.

Jupiter is the largest planet in the Solar System and the fifth planet from the Sun. It is a huge planet with a mass 0.001% of that of the Sun. The name Jupiter was coined by the Romans after their God Jupiter.

Jupiter has at least 63 known moons which are called its natural satellites. In which the four largest satellites are called Io, Europa, Ganymede, and Callisto. These four satellites are called the Galilean satellites because they were first seen in 1610 by the astronomer Galileo Galilei. Ganymede is the largest moon in the Solar System, with a diameter of 3,260 miles.

4.

The Himalayas are known to be 'Young Fold Mountains'. They are considered young because they have been formed relatively recently in the earth's history, compared to older mountains such as the Aravalis.

5.

Lack of atmosphere around the moon is due to low escape velocity and low gravitational attraction.

About Atmosphere of the Moon:

The Moon is considered to be surrounded by vacuum. The elevated presence of atomic and molecular particles in its vicinity (compared to interplanetary medium), referred to as 'lunar atmosphere' for scientific objectives, is negligible in comparison with the gaseous envelopes surrounding Earth and most planets of the Solar system—less than one hundred trillionth (10−14) of Earth's atmospheric density at sea level. Otherwise, the Moon is considered not to have an atmosphere because it cannot absorb measurable quantities of radiation, does not appear layered or self-circulating, and requires constant replenishment due to the high rate at which its atmosphere is lost to space.

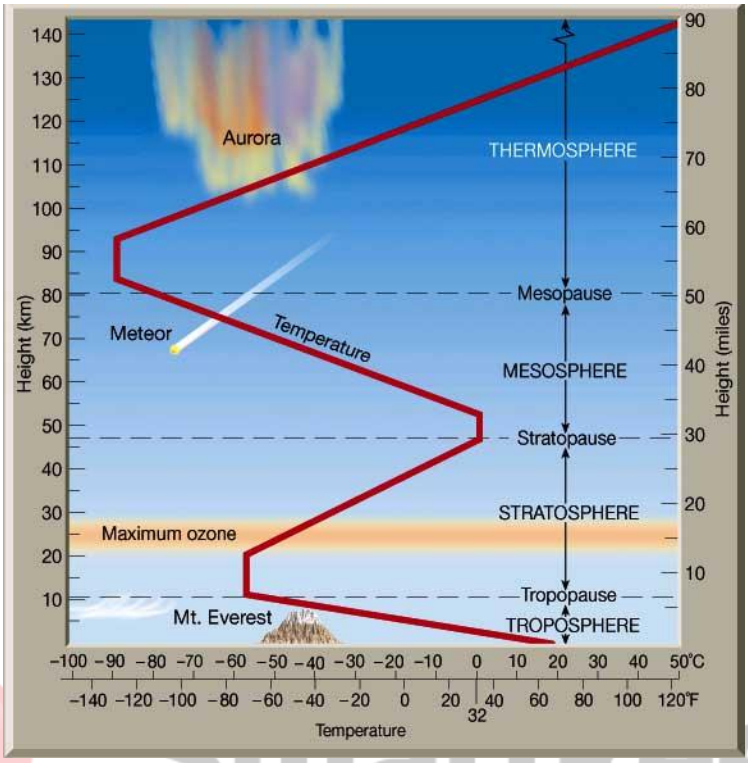
6.

The real length of the year is approximately 365 days, 5 hours, 48 minutes, 45 seconds. Having year of 365 days makes the year too short. To keep up with the real length of the year, while at the same time maintaining an integer number of days, an extra day is added every four years.

About Leap Year:

A leap year is a year containing one additional day in order to keep the calendar year synchronized with the astronomical or seasonal year. Because seasons and astronomical events do not repeat in a whole number of days, calendars that have the same number of days in each year, over time, drift with respect to the event that the year is supposed to track. By inserting an additional day or month into the year, the drift can be corrected. A year that is not a leap year is called a common year.

7.



The correct arrangement of the layer's (from the Earth's surface upwards) are: Troposphere-Stratosphere- Mesosphere- Thermosphere-Exosphere

8.

Ozone Holes are more pronounced at the polar vortex. A polar vortex is a persistent, large scale cyclone located near one or both of a planet's geographical poles. On Earth, the polar vortices are located in the middle and upper troposphere and the stratosphere.

The Antarctic polar vortex is more pronounced and persistent than the Arctic one ; this is because the distribution of landmasses at high latitudes in the Northern Hemisphere gives rise to Rossby waves which contribute to the breakdown of the vortex, whereas in the Southern Hemisphere the vortex remains less disturbed.

9.

Comets have been called dirty snowballs. They are small celestial objects, made of ice, gas, dust and a small amount of organic materials that round our Sun in elliptical orbit. As comets move close to the Sun, they develop tails of dust and ionized gas. Comets have tow tails, a dust tail and a plasma tail.

10.

Neptune’s atmosphere is made up of hydrogen, helium and methane. The methane is Neptune’s upper atmosphere absorbs the red light from the Sun, but reflects the blue light from the Sun back into space. This is why Neptune appears blue light from the Sun back into space. This is why Neptune appears blue.