



ST. JOSEPH'S COLLEGE, PRAYAGRAJ
HALF YEARLY EXAMINATION 2024
GEOGRAPHY
CLASS - IX

TIME: 2 Hours

MM: 80

Attempt **all** questions from Part I (Compulsory)
A total of **five** questions are to be attempted from Part II.
The marks intended for questions or part of questions are given in brackets [].

PART I - 30 Marks

(Attempt all questions from this Part)

Q 1) Answer the following questions briefly:

1. What do you understand by perihelion and aphelion? [2]
2. Explain the following terms. [2]
 - a) Oil Spill
 - b) Lithification
3. With the help of a diagram, show the important lines of latitude. [2]
4. Give two differences between physical and chemical weathering. [2]
5. Study the picture given below and answer the questions that follow: [2]



- a) What type of pollution is shown in the picture?
- b) What are the dangers involved in the pollution caused by the above media?

Q 2) On the outline map of the World provided, mark and label the following. [10]

1. River Colorado
2. Appalachian Mountains
3. Tibetan Plateau
4. River Amazon
5. Iranian plateau
6. Great Dividing Range
7. River Niger
8. Scandinavian Highlands
9. River Euphrates
10. Patagonian plateau.

Q 3) Choose the correct option for each of the following:

i. Assertion: The polar diameter of the earth is more than the Equatorial diameter.

Reason: The earth has acquired the oblate spheroid shape due to the rotation of the earth.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false.
- d) A is false but R is true.

[1]



- ii. The distance between two lines of longitude is maximum at which latitude? [1]
- Tropic of Cancer
 - North Pole
 - Equator
 - Arctic circle
- iii. Assertion: Midday sun can be seen overhead in Chennai twice a year, but not even once in Delhi. [1]
Reason: Delhi lies within the tropics while Chennai lies above the Tropic of Cancer.
- Both A and R are true and R is the correct explanation of A.
 - Both A and R are true and R is not the correct explanation of A.
 - A is true but R is false.
 - A is false but R is true.
- iv. Name the two broad divisions the earth crust is divided depending on chemical composition. [1]
- Lithosphere, hydrosphere
 - SIAL, SIMA
 - Core, Mantle
 - Crust, Asthenosphere
- v. Which of the following are correctly matched? [1]
- Young fold mountains: Himalayas, Alps
 - Old fold mountains: Urals, Aravalli
 - Residual mountains: Nilgiri, Rajmahal Hills
 - All of the above.
- vi. The alteration of the composition or structure of a rock by heat, pressure or other natural agency. [1]
- Thermal Metamorphism
 - Metamorphism
 - Regional Metamorphism
 - Dynamic Metamorphism
- vii. The volcanoes that occur near Earthquake belts and tectonic plate boundaries. [1]
- Caldera
 - Geysers
 - Pacific ring of fire
 - Mid Atlantic belt
- viii. The point on the earth's surface directly above the seismic focus is called. [1]
- Epicentre
 - Seismic focus
 - Seismograph
 - Mercalli
- ix. The sudden contraction and expansion peels off the outer rock layer. [1]
- Solution
 - Exfoliation
 - Hydration
 - Oxidation
- x. Motor vehicles fuel, burning of wood, coal and solid waste disposal are major sources of which pollutant? [1]
- Carbon monoxide
 - Nitrogen oxides
 - Particulates
 - Sulphur oxides

PART II - 50 Marks

(Attempt any five Questions)

Q 4)

1. *Water is essential for life as we all know, but why? A new analysis may rewrite the idea that it is solely the medium in which the reactions that drive life occur, instead viewing it as an active participant. The findings offer clues of the role that water played in the beginning of life on Earth.*

- Why is the Earth often called as a 'watery planet'.
- What do you understand by water cycle?

[2]

[2]

[3]

2. Highlight the various indirect sources of information about the Earth's interior.

3. Give a geographical reason for each:

- The Earth is the only habitable Planet.
- Core of the Earth is working as a magnetic field.
- Sial floats over the Sima.

4. Draw a well labelled diagram showing the internal structure of the Earth.

[3]

Q 5)

1. Write the name of a country which has the maximum number of time zones in the world. What is the reason behind a country having many time zones?

[2]

2. Which line is known as the Prime Meridian? State its importance.

[2]

3. Give a geographical reason for each of the following:

[3]

- Lines of latitude are not of equal length.
- Diametrically opposite lines of longitude and the Equator are called Great Circles.
- The International Date Line deviates and goes zig-zag near some islands in the Pacific Ocean.

4. A football match commences at Delhi (77° E) at 10:00 am on Sunday. What will be the local time at Alexandria (150° E).

[3]

Q 6)

1. *An amazing natural phenomenon occurs in the northern hemisphere mostly during summer solstice. However southern hemisphere experiences it during winter solstice on 22 December. The duration of this phenomenon depends on how far an area is from the Arctic Circle. The sun doesn't set below the horizon in these areas during summer solstice. There is a heavy inflow of tourists in such areas during summer solstice to observe this phenomenon which in turn helps to boost the economy of these areas.*

a) What is this phenomenon called?

[2]

b) Why does not the sun set at night in such areas during summer solstice?

2. What are the effects of Rotation of the Earth?

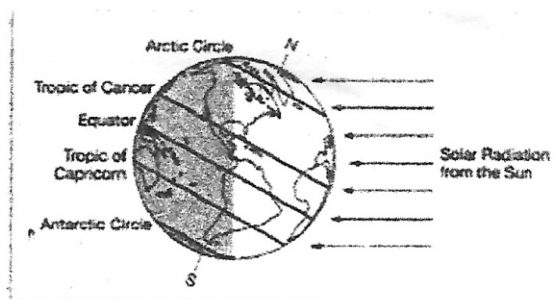
[2]

3. With the help of diagram show the inclination of the Earth's Axis.

[3]

4. Refer to the image below and answer the questions that follow:

[3]



a) What does the diagram show and on which date does the above phenomenon occur?

b) Which hemisphere has the longest night on this day?

c) The rays of the sun fall vertically on which latitude?

Q 7)

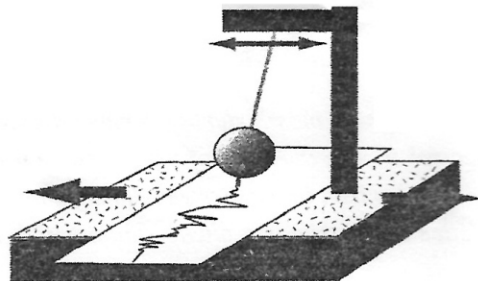
1. Describe how igneous rocks are formed. State their main characteristics. [2]
2. What are the causes of Metamorphism? Give an example of metamorphic rock. [2]
3. Give a geographical reason for each of the following: [3]
 - a) Igneous rocks are generally crystalline in nature.
 - b) Sedimentary rocks are also called Secondary Rocks.
 - c) Metamorphic rocks are considered good for the use as building materials.
4. What is Rock Cycle? Explain with the help of diagram.

Q 8)

1. Volcanic eruption could be affecting our ability to accurately predict changes in rainfall and chances of severe weather events in the near term, according to a new study. (Source: Indian Express)
 - a) Explain how volcanic eruption can cause rainfall.
 - b) Mention how Volcanoes can be useful to man. [2]
2. a) Mention the main causes behind the occurrence of a Volcanic eruption.
b) Explain how volcanoes result in Global warming. [2]
3. Give a geographical reason:
 - a) Earthquakes are closely associated with volcanic belts.
 - b) Circum Pacific belt is also called 'Ring of Fire'.
 - c) Hot springs and geysers have health benefits. [3]
4. Classify Volcanoes on the basis of 'frequency of eruption', citing an example for each. [3]

Q 9)

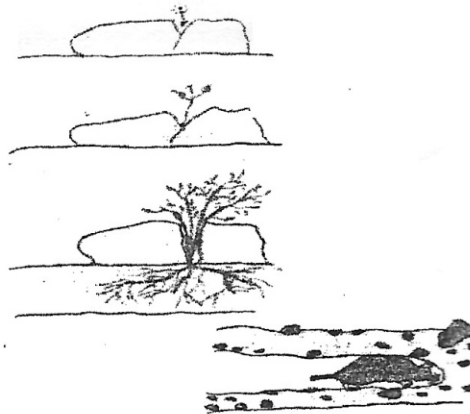
1.



- a) Identify the instrument shown in the image above. Also mention what does it record or measure.
 - b) State the difference between Seismic focus and Epicentre. [2]
2. Earthquakes are the result of plate tectonics, or shifting plates in the crust of Earth, and quakes occur when the frictional stress of gliding plate boundaries builds and causes failure at a fault line. In an earthquake, elastic strain energy is released and waves radiate, shaking the ground. Scientists can predict where major temblors might occur in a general sense, but research does not yet allow forecasts for specific locations or accurate predictions of timing.
- a) Highlight the anthropogenic factors which cause an earthquake.
 - b) How is the intensity of an earthquake measured? [2]
3. "An earthquake is a reminder of the fragility of life and the need to be prepared for anything." – Jacinda Ardern. Considering the above statement, explain two destructive and one constructive effect of an Earthquake. [3]
4. Name the following:
- a) The disaster that occurs when the epicentre of an earthquake is in the sea bed.
 - b) Earthquake wave that does not pass through liquids.
 - c) Plate boundary where two tectonic plates slide past each other. [3]

Q 10)

1. 'Weathering is a static Process', explain the above line, stating which the agents of gradation are. *denudation* [2]
2. 'Physical weathering, also known as mechanical weathering, is a natural process that breaks down rocks into smaller particles without altering their chemical composition. This type of weathering is primarily driven by physical forces and environmental factors.'
- a) Which is the main agent of physical weathering.
- b) Explain 'Exfoliation' with reference to physical weathering. [2]
3. Observe the image and answer the questions that follow.



- a) Identify the type of weathering shown in the image above. How do the agents shown above cause weathering?
- b) Discuss how Human beings act as an agent of Weathering. [3]
4. a) Distinguish between Physical and Chemical weathering. (any two points of difference)
- b) State one positive and one negative impact of weathering. [3]

Q 11)

1. 'Danya went to Agra and she was very excited to see the Taj Mahal. On seeing the historical monument, she noticed that the colour of Taj Mahal was slightly yellow, rather than white and she questioned her father regarding the same.'
- a) What according to you could be the reason behind Danya's observation?
- b) The above problem falls under which type of pollution. [2]
2. What is Radiation pollution? Name two sources of Radiation pollution. [2]
3. Give a reason for each of the following:
- a) Doctors advise against exposing the human body to X-rays.
- b) Soil pollution is more dangerous than any other type of pollution.
- c) Oil spills are harmful for marine life. [3]
4. For half a century, U.S. agencies such as the EPA have deemed noise pollution "a growing danger to the health and welfare of the Nation's population." The European Environmental Agency reports that noise ranks second only to air pollution as the environmental exposure most harmful to public health. Yet, in sectors from government regulation to health care practice, the threats posed by noise remain "often underestimated," according to the International Commission on Biological Effects of Noise. (<https://magazine.hms.harvard.edu/>)
- a) Define noise pollution.
- b) Mention two sources each of Indoor and Outdoor noise pollutants. [3]