Wada Nirmiti Education Society's
GURUKUL GLOBAL SCHOOL
WORKSHEET

SUB: LESSON: STD: VIII

NAME: _____ ROLL No: _____ DATE:

MCQ

1. What term describes the true shape of the Earth, which bulges at the equator and is slightly flattened at the poles?
(a) Perfect sphere
(b) Oblate spheroid
(c) Flat disc
(d) Prolate spheroid

2. Which map projection preserves shapes and directions for navigation but significantly inflates sizes near the polar regions?
(a) Robinson Projection
(b) Mercator Projection
(c) Peters Projection
(d) Conical Projection

3. What proportion of the Earth's total water is held within the world's oceans?
(a) 50 per cent
(b) 71 per cent
(c) 97 per cent
(d) 85 per cent

4. Which ocean movement is characterized as a warm current flowing northward through the Atlantic Ocean towards Western Europe?
(a) Labrador Current
(b) Canary Current
(c) Gulf Stream
(d) Benguela Current

5. What is the deepest section of the Mariana Trench called, reaching over 11,000 metres below sea level?
(a) Mariana Deep
(b) Challenger Deep
(c) Java Trench
(d) Puerto Rico Deep

6. What geographical entity is referred to as the 'Third Pole' due to containing the largest freshwater reserves outside the polar regions?
(a) The Alps
(b) The Rocky Mountains
(c) The Tibetan Plateau
(d) The Andes Mountains

7. Which feature acts as a global carbon sink by absorbing carbon dioxide from the atmosphere and storing it underground?
(a) The Eurasian Steppes
(b) The Gobi Desert
(c) The Atacama Desert
(d) The Grand Canyon

8. What mountain range serves as a traditional physical boundary between the continents of Europe and Asia?
(a) The Alps
(b) The Ural Mountains
(c) The Appalachian Mountains
(d) The Andes Mountains

9. Which human-made passage opened in 1869 to create a direct maritime waterway connecting the Red Sea to the Mediterranean Sea?
(a) Panama Canal
(b) Erie Canal
(c) Suez Canal
(d) Kiel Canal

10. What unique geographical phenomenon occurs at 'Old Faithful' in Yellowstone National Park due to subsurface volcanic heat?
(a) Tsunami
(b) Geyser
(c) Glacier
(d) Sinkhole

Short Answer Questions

1. Why do all map projections on a flat surface involve some degree of distortion?
Answer: The Earth is an oblate spheroid (a three-dimensional curved surface). It is mathematically impossible to flatten a three-dimensional spherical surface onto a two-dimensional flat map without stretching, tearing, or compressing parts of it. Consequently, cartographers must choose between preserving correct shapes (like the Mercator Projection) or balancing correct size and shape (like the Robinson Projection), making every flat map a compromise.
2. Explain the ecological significance of coral reefs and the primary threats affecting their survival.
Answer: Coral reefs, often called the 'rainforests of the sea', occupy a tiny fraction of the ocean floor but support nearly one-quarter of all marine species by providing essential shelter and food. They are severely threatened by human actions, including overfishing, marine pollution, and climate change, which alters ocean temperature and chemistry, leading to widespread coral bleaching and habitat destruction.
3. Describe the main physical characteristics and ecological role of the Eurasian Steppes.
Answer: The Eurasian Steppes are vast, unforested temperate grasslands stretching over 8,000 kilometres from west to east. Characterized by hot summers, cold winters, and moderate seasonal rainfall, they play a crucial role as a global carbon sink by absorbing atmospheric carbon dioxide and storing it underground. Additionally, they serve as vital staging and resting grounds for migratory bird species like the Siberian crane.

Long Answer Questions

1. Examine the crucial functions played by global oceans in supporting marine biodiversity, regulating planetary climate, and facilitating international trade.

Answer:

Oceans cover about 71 per cent of the Earth's surface and hold 97 per cent of its water, serving three critical functions:

• Biodiversity & Oxygen Production: Oceans sustain diverse ecosystems ranging from microscopic plankton to giant blue whales. Microscopic marine organisms generate nearly half of the oxygen required by living beings on Earth.

• Climate Regulation: Oceans absorb immense thermal energy from solar radiation, releasing it slowly to moderate global temperatures. Evaporation adds moisture to the atmosphere, generating cloud cover and precipitation patterns across continents.

• Oceanic Currents: Systems like the Gulf Stream carry warm equatorial waters towards polar regions, significantly warming coastal climates in places like Western Europe.

• Maritime Trade Routes: Oceans and strategic waterways—such as the Suez Canal, Persian Gulf, and Strait of Malacca—form vital corridors that handle the vast majority of global commercial shipping and economic transportation.

2. Detail the formation, geographical importance, and ecological impacts of climate change on the Tibetan Plateau.

Answer:

The Tibetan Plateau represents one of the most prominent landforms on the planet:

• Geological Formation: Located north of the Himalayas, the Tibetan Plateau was formed by intense tectonic collisions between the Indo-Australian and Eurasian plates. It stands as the highest and largest plateau on Earth, averaging over 4,500 metres above sea level.

• The 'Third Pole': Due to its massive accumulation of ice and snow, it holds the largest freshwater reserves outside the Arctic and Antarctic regions, earning it the designation of the 'Third Pole'.

• River Systems: It acts as the principal hydrological origin for major Asian river systems, including the Indus, Brahmaputra, and Yangtze, which sustain hundreds of millions of people downstream.

• Climate Influence & Climate Change: The plateau plays a central role in driving atmospheric circulation and monsoon patterns across Asia. Accelerating climate change causes rapid snow-melt, leading to the expansion of existing lakes, formation of new water bodies, and long-term risks to regional water security.

3. Analyze the environmental significance of the Amazon Rainforest and discuss how human activities and climate change threaten its ecosystem.

Answer:

The Amazon Rainforest in South America is a critical component of global biosphere stability:

• 'Lungs of the Earth': Supported by the Amazon River basin, it forms the largest tropical rainforest complex on Earth. Its massive vegetation cover performs crucial photosynthesis, absorbing immense volumes of carbon dioxide and releasing vital oxygen.

• Biodiversity & Indigenous Stewardship: The Amazon hosts millions of plant and animal species, along with nearly 400 indigenous communities whose traditional practices actively protect and preserve the ecological landscape.

• Transcontinental Nutrient Cycle: The rainforest relies on an interconnected global climate system where airborne mineral dust travels across the Atlantic Ocean from the Sahara Desert to replenish soil phosphorus levels.

• Threats & Environmental Emergency: Large-scale deforestation for agriculture, cattle ranching, and resource exploitation, combined with climate-induced droughts, weakens the rainforest's capacity to act as a carbon sink, posing severe threats to global climate equilibrium.