

## **SOCIAL SCIENCE SIMPLIFIED**

*Online Learning Initiative by Dr. Reena Srivastava*

**Class -9<sup>th</sup> (Geography) Subjective Practice Sheet**

**Chapter- 'Shaping of the Earth's Surface'**

**Note: The key points of answer key is given. Students need to elaborate the given points.**

### **2 Marks Questions (VSA Questions)**

1. Define plate tectonics.
  - Theory by W.J. Morgan
  - Earth's crust broken into plates
  - Plates move over semi-molten mantle
  
2. What is the lithosphere?
  - Rigid outer layer of Earth
  - Includes crust + upper mantle
  - Broken into tectonic plates
  
3. Name two major tectonic plates.
  - Pacific Plate, Eurasian Plate, African Plate, Indo-Australian Plate, etc.
  
4. What is weathering?
  - Breakdown of rocks at Earth's surface
  - No movement involved
  - Types: physical, chemical, biological
  
5. What is erosion?
  - Wearing away and movement of soil/rocks
  - Agents: water, wind, ice, waves
  
6. What is a delta?
  - Landform at river mouth
  - Formed by deposition of sediments
  - Fertile soil, supports agriculture

### 3 Marks Questions (SA Questions)

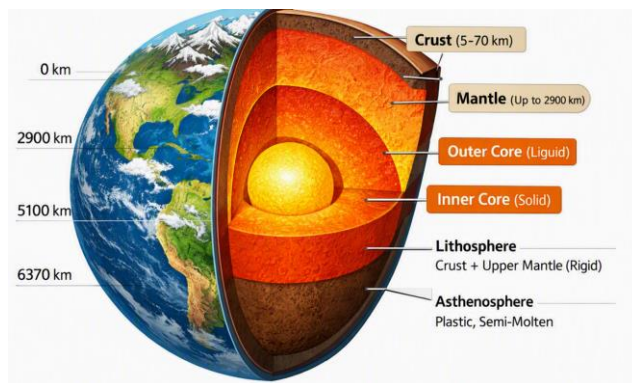
7. Differentiate between continental and oceanic plates.
  - Continental plates: carry continents, thicker
  - Oceanic plates: carry ocean floors, thinner
  - Mixed plates: carry both
  
8. Explain the three types of plate boundaries.
  - Convergent: plates collide → fold mountains, volcanoes
  - Divergent: plates move apart → mid-ocean ridges
  - Transform: plates slide past → earthquakes
  
9. How does biological weathering occur?
  - Caused by plants, animals, microorganisms
  - Roots split rocks, burrowing animals loosen soil
  - Microbes produce acids
  
10. How are farmers affected by erosion?
  - Loss of fertile topsoil
  - Reduced crop yields
  - Soil degradation → economic loss
  
11. Describe the role of rivers in shaping landforms.
  - Upper course: V-shaped valleys, waterfalls
  - Middle course: meanders, floodplains
  - Lower course: deltas, levees
  
12. What are moraines?
  - Deposits left by glaciers
  - Types: lateral, terminal, medial
  - Importance: fertile soil, natural dams

### 5 Marks Questions (LA Questions)

**Q13. Explain the structure of the Earth with a neat diagram.**

1. Crust – outermost, thin, 30–40 km under continents, 5–7 km under oceans.
2. Mantle – thick, mostly solid, extends to 2900 km.
3. Core – inner (solid) and outer (liquid), mainly iron and nickel.
4. Lithosphere – crust + upper mantle, rigid, broken into plates.

5. Asthenosphere – semi-molten, allows plate movement.



**Q14. Describe the Ring of Fire.**

1. Located around the Pacific Ocean.
2. Zone of frequent earthquakes and volcanic eruptions.
3. Caused by convergent and transform plate boundaries.
4. Includes countries like Japan, Philippines, Chile, USA (west coast).
5. Important for disaster management and geological studies.

**Q15. Explain the three types of weathering with examples.**

1. Physical – breakdown due to temperature changes, frost, wind.
2. Chemical – reactions with water, air, acids → new substances.
3. Biological – roots, burrowing animals, microbes splitting rocks.
4. No movement involved, only breakdown.
5. Essential for soil formation and shaping landforms.

**Q16. Discuss the impact of erosion on human activities.**

1. Agriculture – loss of fertile topsoil, reduced yields.
2. Construction/mining – destabilised land, safety risks.
3. Tourism – beaches, rivers, landscapes destroyed.
4. Fishing – coastal erosion affects livelihoods.
5. Overall economic and environmental damage.

**Q17. Explain coastal landforms formed by erosion.**

1. Cliffs – steep rock faces formed by wave undercutting.
2. Caves – formed when waves erode weak rock parts.
3. Arches – caves on opposite sides meet.
4. Stacks – isolated pillars after arch collapse.
5. Wave-cut platforms – flat areas left behind as cliffs retreat.

**Q18. Describe glacial landforms.**

1. U-shaped valleys – glaciers widen and deepen river valleys.
2. Cirques – bowl-shaped depressions at glacier head.
3. Aretes – sharp ridges between valleys.

4. Fjords – sea floods glacial valleys, forming deep inlets.
5. Moraines – deposits of rocks/soil left by glaciers.

**Q19. How does underground water create landforms?**

1. Karst topography – formed in limestone regions.
2. Caves – hollow spaces due to chemical weathering.
3. Stalactites – icicle-shaped formations hanging from cave ceilings.
4. Stalagmites – formations rising from cave floors.
5. Sinkholes & underground rivers – depressions and flowing water systems.

**Q20. Explain landslides and their causes.**

1. Natural causes – heavy rainfall, earthquakes, volcanic eruptions.
2. Human causes – deforestation, mining, road construction.
3. Steep slopes and loose rocks increase risk.
4. Poor drainage → slope failure.
5. Leads to sudden destruction of property, life, and environment