

GEOGRAPHY CORE VOLUME IV

50 Completely New Solved Premium MCQs for PPSC, FPSC, CSS, and Competitive Exams

Series: Unique Set D

Items: 50 Solved Questions

Standard: Advanced Exam Level

Q1. Which specific atmospheric layer is characterized by an increase in temperature with altitude due to the direct absorption of short-wave solar radiation by atomic oxygen?

A. Troposphere

B. Mesosphere

✓ C. Thermosphere

D. Stratosphere

CORRECT OPTION: C — CORE EXPLANATION:

In the thermosphere, temperatures rise rapidly with altitude because the highly rarefied air molecules and atomic oxygen directly absorb intense solar X-rays and short-wave ultraviolet radiation.

Q2. The 'Great Dividing Range' is a dominant structural mountain system located on which continent?

A. North America

B. Africa

✓ C. Australia

D. Antarctica

CORRECT OPTION: C — CORE EXPLANATION:

The Great Dividing Range runs parallel to the eastern and southeastern coastlines of Australia, stretching over 3,500 kilometers and acting as the primary watershed on the continent.

Q3. Which structural landform is created when a block of the Earth's crust drops down between two parallel normal faults?

A. Horst	✓ B. Graben / Rift Valley
C. Anticline	D. Monocline

CORRECT OPTION: B — CORE EXPLANATION:

A graben is an elongated block of crust bounded by faults that has dropped down relative to the adjacent blocks (horsts), forming a classic structural rift valley.

Q4. The 'Moho' (Mohorovicic Discontinuity) marks the definitive structural boundary between which two internal layers of the Earth?

A. Inner Crust and Outer Core	✓ B. Crust and Upper Mantle
C. Asthenosphere and Mesosphere	D. Lower Mantle and Outer Core

CORRECT OPTION: B — CORE EXPLANATION:

The Mohorovicic Discontinuity is the boundary layer where seismic wave velocities change abruptly, dividing the Earth's thin outer crust from the denser underlying mantle.

Q5. Which of the following cold, nutrient-rich ocean currents flows northward along the western coast of South America?

A. Benguela Current	✓ B. Humboldt Current
C. Canary Current	D. California Current

CORRECT OPTION: B — CORE EXPLANATION:

The Humboldt Current (also known as the Peru Current) is a major cold eastern boundary current that drives significant marine upwelling, sustaining one of the world's most productive fisheries.

Q6. The 'Khyber Pass', a critical historical gateway, cuts directly through which major mountain range?

A. Karakoram Range	✓ B. Hindu Kush Range
C. Sulaiman Range	D. Himalayas

CORRECT OPTION: B — CORE EXPLANATION:

The Khyber Pass is situated in the spin-offs of the Hindu Kush mountain range, connecting Pakistan (near Peshawar) with Afghanistan.

Q7. What specialized term refers to the process by which soil minerals and organic matter are washed downward from upper soil horizons to lower horizons by rainwater?

A. Illuviation	✓ B. Eluviation / Leaching
C. Humification	D. Laterization

CORRECT OPTION: B — CORE EXPLANATION:

Eluviation is the transport of dissolved or suspended material from the upper layers of a soil profile (A horizon) via downward percolation, whereas its accumulation in the lower B horizon is called illuviation.

Q8. Which of the following landlocked bodies of water is the lowest point on the Earth's surface exposed to the open air?

A. Lake Baikal	✓ B. The Dead Sea
C. Lake Assal	D. Death Valley

CORRECT OPTION: B — CORE EXPLANATION:

The shores and surface of the Dead Sea sit at approximately 430 meters below sea level, making it the lowest dry land elevation on the planet.

Q9. The 'Thalweg Principle' is a standard rule in political and legal geography used to define what type of feature?

A. Mountain crest international borders

✓ B. Riverine international boundaries

C. Exclusive Economic Zones at sea

D. Airspace sovereignty ceilings

CORRECT OPTION: B — CORE EXPLANATION:

The Thalweg Principle establishes that if a river serves as an international boundary between states, the border line follows the center of the primary navigable channel rather than the exact physical midpoint between banks.

Q10. Which primary river valley is home to the massive Three Gorges Dam, the largest hydroelectric power station on Earth?

A. Yellow River

B. Mekong River

✓ C. Yangtze River

D. Pearl River

CORRECT OPTION: C — CORE EXPLANATION:

The Three Gorges Dam spans the Yangtze River in Hubei Province, China, generating massive volumes of electricity and regulating regional flood control.

Q11. The 'Bari Doab' region in the fertile plains of Punjab, Pakistan, is situated between which two major rivers?

✓ A. Ravi and Beas / Sutlej

B. Chenab and Ravi

C. Jhelum and Chenab

D. Indus and Jhelum

CORRECT OPTION: A — CORE EXPLANATION:

The name 'Bari' is a portmanteau derived from 'Ba' for the Beas River (which historically joined the Sutlej nearby) and 'Ri' for the Ravi River.

Q12. Which unique global desert is recognized as the oldest continuously arid desert on Earth, stretching along a coastal strip?

A. Sahara Desert	B. Gobi Desert
✓ C. Namib Desert	D. Kalahari Desert

CORRECT OPTION: C — CORE EXPLANATION:

The Namib Desert in southern Africa has experienced arid or semi-arid conditions for at least 55 million years, driven by the atmospheric drying effects of the cold Benguela Current.

Q13. What type of delta is formed when a river empties into an ocean environment where powerful waves disperse sediment faster than it can pile up?

A. Bird's-foot Delta	✓ B. Cuspate / Wave-dominated Delta
C. Estuarine Delta	D. Lobate Delta

CORRECT OPTION: B — CORE EXPLANATION:

Wave-dominated deltas occur where wave energy is high, reshaping the river's mouth sediment into smooth, tooth-like geometries, like the Tiber Delta in Italy.

Q14. Which strategic shipping canal connects the Mediterranean Sea directly to the Red Sea, bypassing the African continent?

A. Panama Canal	✓ B. Suez Canal
C. Kiel Canal	D. Corinth Canal

CORRECT OPTION: B — CORE EXPLANATION:

Opened in 1869, the Suez Canal cuts through Egypt to provide a direct sea route between European ports and southern and eastern Asia.

Q15. What type of standard map projection is mathematically engineered to preserve exact areas across the entire globe while heavily distorting structural shapes?

A. Mercator Projection	B. Conformal Projection
✓ C. Equal-Area Projection	D. Equidistant Projection

CORRECT OPTION: C — CORE EXPLANATION:

Equal-area projections (such as the Gall-Peters or Lambert cylindrical) preserve the true relative size of landmass areas, making them useful for thematic demographic mappings, though shapes are distorted.

Q16. The 'Katmai' volcanic event is famous, but which historic active volcano erupted in 1815 in Indonesia, triggering the global 'Year Without a Summer'?

A. Krakatoa	✓ B. Mount Tambora
C. Mount Vesuvius	D. Mount Merapi

CORRECT OPTION: B — CORE EXPLANATION:

The 1815 explosion of Mount Tambora was the largest volcanic eruption in recorded history. It injected immense ash and aerosols into the atmosphere, causing global climate anomalies and widespread crop failures in 1816.

Q17. Which minor tectonic plate underlies the Caribbean Sea, bounded by the North American, South American, Nazca, and Cocos plates?

A. Scotia Plate	✓ B. Caribbean Plate
C. Juan de Fuca Plate	D. Philippine Plate

CORRECT OPTION: B — CORE EXPLANATION:

The Caribbean Plate is a mostly oceanic tectonic element responsible for active volcanic island arcs and severe seismic zones across Central America and the Antilles.

Q18. The 'Pampa' biome represents a vast, fertile temperate grassland plain covering significant portions of which South American country?

A. Brazil	✓ B. Argentina
C. Colombia	D. Venezuela

CORRECT OPTION: B — CORE EXPLANATION:

The Pampas are expansive fertile lowlands spanning central-eastern Argentina, Uruguay, and southernmost Brazil, hosting intensive agricultural cultivation and livestock ranching.

Q19. What is the geographic term for a deep, narrow u-shaped glacial valley that has been flooded and submerged by rising sea levels?

A. Ria	✓ B. Fjord
C. Cirque	D. Estuary

CORRECT OPTION: B — CORE EXPLANATION:

Fjords are formed when glaciers carve deep, steep-walled coastal valleys below sea level. When the glacier melts and retreats, the ocean flows in to fill the basin.

Q20. Which layer of the Earth's interior is entirely molten liquid, composed primarily of an iron-nickel mix, generating the planetary magnetic field?

A. Asthenosphere	B. Lower Mantle
✓ C. Outer Core	D. Inner Core

CORRECT OPTION: C — CORE EXPLANATION:

The outer core's high temperatures keep its iron and nickel alloys in a fluid state. Convection currents within this liquid metal drive the geodynamo mechanism that generates Earth's magnetosphere.

Q21. The 'Bab-el-Mandeb' strait is a critical choke point connecting which two major bodies of water?

A. Persian Gulf and Gulf of Oman	✓ B. Red Sea and Gulf of Aden / Arabian Sea
C. Mediterranean Sea and Atlantic Ocean	D. Black Sea and Aegean Sea

CORRECT OPTION: B — CORE EXPLANATION:

The Bab-el-Mandeb Strait separates Yemen on the Arabian Peninsula from Djibouti and Eritrea in the Horn of Africa, acting as a crucial strategic route between the Mediterranean and the Indian Ocean via the Suez Canal.

Q22. What classification is assigned to soils that are formed from parent material that has been transported and deposited by river action?

A. Residual Soil	✓ B. Alluvial Soil
C. Glacial Drift	D. Aeolian Soil

CORRECT OPTION: B — CORE EXPLANATION:

Alluvial soils are unconsolidated sediments deposited by rivers along floodplains and deltas. They are typical of highly productive agrarian basins like the Indus and Nile valleys.

Q23. The 'Lake Baikal', located in southern Siberia, Russia, holds which unique geographic distinction?

A. The largest lake by surface area	✓ B. The deepest and oldest freshwater lake in the world
C. The saltiest inland water body	D. The highest altitude navigable lake

CORRECT OPTION: B — CORE EXPLANATION:

Lake Baikal is a massive ancient rift lake containing roughly 22-23% of the world's fresh surface water, reaching a maximum depth of 1,642 meters.

Q24. Which line on a weather map connects locations that register identical barometric pressure levels at a given time?

A. Isotherm	✓ B. Isobar
C. Isohyet	D. Isonef

CORRECT OPTION: B — CORE EXPLANATION:

Isobars map equal atmospheric pressure. Closely packed isobars indicate a steep pressure gradient, which typically corresponds to high wind speeds.

Q25. The 'Gulf Stream' is a prominent current that plays an essential role in warming the climate of which region?

A. Western South America	✓ B. Western Europe
C. Eastern Asia	D. Western Africa

CORRECT OPTION: B — CORE EXPLANATION:

The Gulf Stream carries warm tropical water from the Gulf of Mexico across the North Atlantic, moderating winter temperatures in Western and Northwestern Europe.

Q26. What is the capital city of Canada, serving as its federal administrative and legislative core?

A. Toronto	B. Montreal
✓ C. Ottawa	D. Vancouver

CORRECT OPTION: C — CORE EXPLANATION:

Ottawa was selected as the permanent capital of Canada by Queen Victoria in 1857 due to its strategic position between English-speaking Ontario and French-speaking Quebec.

Q27. The 'Great Blue Hole' is a massive underwater sinkhole formation located off the coast of which Central American country?

A. Honduras	✓ B. Belize
C. Guatemala	D. Costa Rica

CORRECT OPTION: B — CORE EXPLANATION:

The Great Blue Hole is a world-renowned marine sinkhole located near the center of Lighthouse Reef off the coast of Belize, formed during past glacial periods when sea levels were lower.

Q28. In human and economic geography, the 'Demographic Transition Model' tracks shifts over time in which two main variables?

A. Immigration and Emigration rates	✓ B. Crude Birth Rates and Crude Death Rates
C. Urbanization and Industrialization indexes	D. GNP growth and Literacy percentages

CORRECT OPTION: B — CORE EXPLANATION:

The Demographic Transition Model (DTM) uses crude birth rates and crude death rates to model how a country's population dynamics evolve as it shifts from an agrarian to an industrial economy.

Q29. Which body of water completely separates the island of Ireland from Great Britain?

A. The English Channel	✓ B. The Irish Sea
C. The North Sea	D. The Celtic Sea

CORRECT OPTION: B — CORE EXPLANATION:

The Irish Sea is bounded by Ireland to the west and Great Britain (Scotland, England, and Wales) to the east, connecting to the Atlantic Ocean via Saint George's Channel.

Q30. What geomorphic term defines an isolated, flat-topped hill or mountain with steep sides, smaller in area than a mesa?

✓ **A. Butte**

B. Plateau

C. Cuesta

D. Inselberg

CORRECT OPTION: A — CORE EXPLANATION:

Through continuous wind and water erosion, plateaus break down into mesas, which further erode into smaller, isolated, flat-topped towers with vertical walls called buttes.

Q31. The 'Potohar Plateau' in Pakistan is bounded to the south by which distinct mountain feature?

A. Margalla Hills

✓ **B. Salt Range**

C. Sulaiman Range

D. Toba Kakar Range

CORRECT OPTION: B — CORE EXPLANATION:

The Salt Range forms the southern boundary of the Potohar Plateau, separating it from the flat alluvial plains of the Punjab.

Q32. Which narrow strait forms the primary shipping corridor linking the Persian Gulf with the Gulf of Oman and the open ocean?

A. Strait of Malacca

✓ **B. Strait of Hormuz**

C. Strait of Gibraltar

D. Bosphorus Strait

CORRECT OPTION: B — CORE EXPLANATION:

The Strait of Hormuz is one of the world's most critical energy transit choke points, separating Iran from Oman and the United Arab Emirates.

Q33. The 'Llanos' represent a vast, highly seasonal tropical grassland plain drained by which major South American river system?

A. Amazon River	✓ B. Orinoco River
C. Parana River	D. Magdalena River

CORRECT OPTION: B — CORE EXPLANATION:

The Llanos is a highly dynamic savanna basin situated across Colombia and Venezuela, drained primarily by the Orinoco River network.

Q34. Which scale is used by seismologists to measure the total absolute amount of energy released by an earthquake event?

A. Modified Mercalli Scale	✓ B. Moment Magnitude Scale
C. Fujita Scale	D. Saffir-Simpson Scale

CORRECT OPTION: B — CORE EXPLANATION:

The Moment Magnitude Scale (Mw) has largely replaced the older Richter scale for medium-to-large events because it directly estimates the physical energy released based on rock rigidity, fault slip area, and displacement distance.

Q35. Which Scandinavian country is geographically characterized by thousands of deep coastal fjords along its western perimeter?

A. Sweden	B. Finland
✓ C. Norway	D. Denmark

CORRECT OPTION: C — CORE EXPLANATION:

Norway's long Atlantic coastline was heavily carved by thick Pleistocene ice sheets, resulting in its iconic glaciated fjord network.

Q36. The 'Kirthar Mountain Range' runs primarily as a natural boundary along the western frontier of which province of Pakistan?

A. Punjab	B. Khyber Pakhtunkhwa
✓ C. Sindh	D. Gilgit-Baltistan

CORRECT OPTION: C — CORE EXPLANATION:

The Kirthar Mountains form a rugged rock boundary separating the lower Indus valley plains of Sindh from the elevated dry basins of Balochistan.

Q37. Which geographic term describes the specific region where a river system originates and gathers its initial flow?

A. Estuary	✓ B. Headwaters / Source
C. Distributary	D. Confluence

CORRECT OPTION: B — CORE EXPLANATION:

The headwaters refer to the furthest upstream tributaries where a river begins, typically in elevated mountainous terrains.

Q38. The 'Durand Line' serves as the international border separating which two modern sovereign nations?

A. India and China	✓ B. Pakistan and Afghanistan
C. Iran and Pakistan	D. Tajikistan and Afghanistan

CORRECT OPTION: B — CORE EXPLANATION:

Established in 1893 by Sir Mortimer Durand, this 2,670-kilometer boundary delineates the border between Pakistan and Afghanistan.

Q39. Which of the following is recognized as the world's largest sand desert (erg), covering much of the southern Arabian Peninsula?

A. An Nafud	✓ B. Rub' al Khali
C. Syrian Desert	D. Dasht-e Kavir

CORRECT OPTION: B — CORE EXPLANATION:

The Rub' al Khali, or 'Empty Quarter,' spans across Saudi Arabia, Oman, the UAE, and Yemen, making it the largest continuous body of sand on Earth.

Q40. What soil order is characterized by a lack of distinct profile horizons, commonly found in newly formed alluvial deposits or steep, eroding slopes?

A. Mollisols	✓ B. Entisols
C. Spodosols	D. Oxisols

CORRECT OPTION: B — CORE EXPLANATION:

Entisols are mineral soils that lack distinct genetic horizons due to their relative youth or because they form on dynamic, unstable surfaces like shifting dunes or active floodplains.

Q41. The 'Mekong River' empties into the South China Sea through a vast, highly productive delta located in which country?

A. Cambodia	B. Thailand
✓ C. Vietnam	D. Laos

CORRECT OPTION: C — CORE EXPLANATION:

The Mekong River flows through six nations before entering southern Vietnam, where it splits into a complex distributary web known as the Mekong Delta.

Q42. What type of rock is formed when existing sedimentary or igneous rocks are physically or chemically altered by extreme heat and pressure without melting?

✓ **A. Metamorphic Rock**

B. Intrusive Igneous Rock

C. Clastic Sedimentary Rock

D. Evaporite

CORRECT OPTION: A — CORE EXPLANATION:

Metamorphism occurs deep underground where intense tectonic pressure and heat recrystallize minerals within a rock without turning it into liquid magma.

Q43. The 'Taklamakan Desert', known for its hyper-arid interior sand dunes, is located within which country?

A. Mongolia

✓ **B. China**

C. Iran

D. Uzbekistan

CORRECT OPTION: B — CORE EXPLANATION:

The Taklamakan Desert occupies the Tarim Basin in the Xinjiang region of northwest China. It is a classic rain-shadow desert bounded by the high Tian Shan and Kunlun mountain ranges.

Q44. What term defines the dry, warm wind that descends the leeward side of the Rocky Mountains, often causing rapid snowmelt?

A. Mistral

✓ **B. Chinook**

C. Sirocco

D. Bora

CORRECT OPTION: B — CORE EXPLANATION:

The Chinook is a rain-shadow wind that warms adiabatically as it compresses and descends mountain slopes, often raising local temperatures by tens of degrees in a matter of hours.

Q45. The 'Rift Valley' of East Africa is a prime global example of which type of plate tectonic boundary?

A. Convergent Boundary	✓ B. Divergent Boundary
C. Transform Fault	D. Subduction Zone

CORRECT OPTION: B — CORE EXPLANATION:

The East African Rift is an active continental divergent boundary where the African Plate is gradually splitting into two smaller tectonic entities: the Somalian and Nubian plates.

Q46. What is the official administrative capital city of South Africa where the executive branch of government resides?

A. Cape Town	B. Johannesburg
✓ C. Pretoria	D. Bloemfontein

CORRECT OPTION: C — CORE EXPLANATION:

South Africa uniquely maintains three official capital cities: Pretoria serves as the administrative/executive capital, Cape Town as the legislative capital, and Bloemfontein as the judicial capital.

Q47. The 'Appalachian Mountains', an older, heavily eroded mountain chain, are located in which geographic region?

A. Western Canada	✓ B. Eastern United States
C. Central Europe	D. Southern Australia

CORRECT OPTION: B — CORE EXPLANATION:

The Appalachians run along the eastern margin of North America, formed over 400 million years ago during Paleozoic continental collisions.

Q48. Which of the following is recognized as the longest river system on the African continent?

A. Congo River	✓ B. Nile River
C. Niger River	D. Zambezi River

CORRECT OPTION: B — CORE EXPLANATION:

The Nile River stretches roughly 6,650 kilometers northward from its equatorial headwaters to the Mediterranean Sea, making it the longest river in Africa and historically disputed as the longest globally.

Q49. The 'Strait of Gibraltar' forms a strategic oceanic gateway separating Europe from which continent?

A. Asia	✓ B. Africa
C. South America	D. Antarctica

CORRECT OPTION: B — CORE EXPLANATION:

The Strait of Gibraltar connects the Atlantic Ocean to the Mediterranean Sea, separating Spain (Europe) from Morocco (Africa) by only 14 kilometers at its narrowest point.

Q50. What demographic index measures the average number of children a woman is expected to have during her reproductive years within a given population?

A. Crude Birth Rate	✓ B. Total Fertility Rate (TFR)
C. Natural Increase Rate	D. Fecundity Index

CORRECT OPTION: B — CORE EXPLANATION:

The Total Fertility Rate (TFR) is a refined demographic metric that provides the average number of live births per woman over her childbearing years under current age-specific fertility behaviors.