

General Awareness

Geography Rocks

Type of Rock	Formation Process	Key Features	Examples	Additional Notes (SSC Specific)
Igneous Rocks	Cooling & solidification of molten magma (intrusive or extrusive)	Crystalline structureNo fossilsFirst formed rocksCan be coarse or fine-grained	Granite (intrusive), Basalt (extrusive)	 Basalt: Dark, heavy, found in Deccan Plateau Granite: Used in construction No stratification or layering
Sedimentary Rocks	Deposition, compaction, and cementation of sediments (mechanical, chemical or organic origin)	Layered (strata)Often fossiliferousSoft, porousShows bedding & crossbedding	Limestone, Sandstone, Shale, Chalk	- Limestone: Formed from shells, coral - Shale: Fine-grained, splits easily - Covers ~75% of Earth's surface
Metamorphic Rocks	Alteration of pre-existing rocks under heat, pressure, and chemically active fluids (without melting)	- Hard, compact - Often shows banding , foliation , lineation - No fossils due to recrystallization	Marble (from limestone), Slate (from shale), Gneiss, Schist	 - Marble: Crystalline, used in sculpture (Rajasthan) - Slate: Fine-grained, splits easily (roof tiles) - Gneiss: Shows banding (light & dark minerals) - Schist: Shows foliation due to platy minerals

Continents

			Continue		
Continent	Area (approx)	Population (approx)	Key Physical Features	Major Countries	SSC-Relevant Facts
Asia	44.58 million sq. km (1st)	~4.8 billion (1st)	Himalayas, Plateau of Tibet, Gobi Desert, Yangtze River	China, India, Japan, Russia	★ Largest & most populous continent ★ Mt. Everest (8849 m) - world's highest peak ★ River Yangtze - longest in Asia ★ Countries like Russia and Turkey are transcontinental
Africa	30.37 million sq. km (2nd)	~1.5 billion (2nd)	Sahara Desert, Nile River, Great Rift Valley, Congo Basin	Nigeria, Egypt, South Africa, Kenya	
North America	24.71 million sq. km (3rd)	~600 million	Rocky Mountains, Great Plains, Mississippi River, Great Lakes	USA, Canada, Mexico	 ☼ Panama Canal links to South America ☼ Mississippi – major river ☼ Niagara Falls – between US & Canada



					★ Longest land border: USA-Canada
South America	17.84 million sq. km (4th)	~430 million	Andes Mountains, Amazon Rainforest, Atacama Desert	Brazil, Argentina, Colombia, Chile	** Andes – longest mountain range
Antarctica	14.2 million sq. km (5th)	~1,000 (scientific staff only)	Ice Sheets, Polar Plateau, Transantarctic Mountains	No permanent countries	** Coldest, driest, windiest continent ** 90% of world's ice, 70% of freshwater ** No time zone, no permanent population ** Surrounded by Southern Ocean
Europe	10.18 million sq. km (6th)	~750 million	Alps, Ural Mountains, Danube River, North European Plain	Germany, France, UK, Italy, Ukraine	数 Separated from Asia by Ural Mountains 如 Industrially developed 数 Alps – highest mountain system 如 Danube – longest river in EU
Australia (Oceania)	8.6 million sq. km (7th)	~42 million	Great Dividing Range, Great Barrier Reef, Outback Desert	Australia, New Zealand, Papua New Guinea	 ☼ Smallest continent ☼ Only continent that is also a country (Australia) ☼ Great Barrier Reef – largest coral system ఢ Least populated (excluding Antarctica)
				/	
			<u>Oceans</u>		
Ocean	Aron	1 Location 6	Voy Footure	c cc n	alayant Facts (Integrated)

Ocean	Area	Average	Location &	Key Features	SSC-Relevant Facts (Integrated)
	(Approx)	Depth	Boundaries		
Pacific Ocean	168.7 million sq. km (1st)	~4,280 m	Between Asia/Australia (west) and Americas (east)	- Largest & deepest ocean - Ring of Fire (volcano belt) - Home to coral reefs like Great Barrier Reef - Most island-rich ocean	 ✗ Mariana Trench - Deepest point (11,034 m) ✗ Ocean with most islands (Philippines, Micronesia) ✗ Kuroshio Current - warm current near Japan ✗ Rich in marine biodiversity and reefs
Atlantic Ocean	85.1 million sq. km (2nd)	~3,646 m	Between Americas (west) and Europe/Africa (east)	- S-shaped ocean - Mid-Atlantic Ridge (longest undersea mountain chain) - Important for trade	





Indian Ocean	70.6 million sq. km (3rd)	~3,741 m	Bounded by Africa (west), Asia (north), Australia (east)	- Warmest ocean - Influences Indian monsoon - Busy oil trade route	** Only ocean named after a country (India) ** Sunda Trench – Deepest point (7,725 m) ** Agulhas Current (South Africa) ** Coral-rich (Lakshadweep, Maldives) ** Key strategic route for oil trade
Southern Ocean	21.9 million sq. km (4th)	~4,500 m	Surrounds Antarctica; south of 60°S latitude	- Coldest ocean - Covered with pack ice - Has Antarctic Circumpolar Current	 ☼ Circulates clockwise around Antarctica ☼ Influences global climate and heat distribution ☼ No permanent population 끊 Recent recognition (2000) as an ocean
Arctic Ocean	15 million sq. km (5th)	~1,205 m (Shallowest)	Surrounds North Pole; bordered by Europe, Asia, and North America	- Ice-covered most of the year - Rich in marine life and oil reserves	 ★ Smallest and shallowest ocean ★ Northwest Passage opens due to melting ★ Major oil and gas deposits ★ Plays a key role in global temperature regulation

Geomorphology - Detailed Table for SSC CGL

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Topic / Concept	Explanation	Key Examples / Features	SSC Exam Facts
Geomorphology	Study of landforms, their origin,	Involves study of mountains, plateaus,	Frequently asked in SSC
	evolution, and structure	plains, valleys, etc.	under Physical Geography
Endogenic	Internal forces from within the Earth	Volcanism, Earthquakes, Diastrophism	Create mountains, rift
Forces		(folding, faulting)	valleys, island arcs
Exogenic Forces	External forces on Earth's surface	Weathering, erosion, deposition	Modify existing landforms,
			create valleys and dunes
Weathering	Disintegration of rocks without	Physical, chemical, biological	Weakens rocks before
	movement		erosion; no transport
			involv <mark>e</mark> d
Erosion	Wearing away of earth's surface by	River, wind, glacier, sea	Erosion removes material
	natural agents		and reshapes landforms
Deposition	Settling of eroded material	River delta, sand dunes, moraines	Forms new landforms
			like plains, deltas, beaches
Diastrophism	Large-scale deformation of Earth's	Folding (e.g. Himalayas), Faulting (e.g.	Creates new landforms
	crust	Rift Valley)	like block mountains,
			grabens
Volcanism	Movement of magma onto Earth's	Active, dormant, extinct volcanoes	Creates volcanic
	surface		mountains (e.g. Mt. Fuji,
			Mauna Loa)
Earthquake	Sudden release of energy in Earth's	Measured by Richter Scale /	Focus = origin point;
	crust	Seismograph	Epicenter = point on
			surface
Plate Tectonics	Theory of movement of lithospheric	Convergent, Divergent, Transform	Explains formation of
	plates	boundaries	mountains, earthquakes,
			volcanoes
Rock Cycle	Continuous transformation between	Igneous \rightarrow Sedimentary \rightarrow	Basis of physical structure
	rock types	Metamorphic → back to Igneous	of Earth
Mountains	Large landforms that rise above	Fold (Himalayas), Block (Vosges),	Fold mountains are
	surroundings	Volcanic (Mt. Kilimanjaro)	youngest and highest
			(e.g. Himalayas)





Plateaus	Elevated flat-topped areas	Deccan Plateau, Colorado Plateau	Formed by volcanic or
			tectonic activity
Plains	Low, flat lands with fertile soil	Indo-Gangetic Plain	Result from sediment
			deposition by rivers
Valleys	Depressions between hills or	V-shaped (river), U-shaped (glacier)	Indicates type of erosional
	mountains		agent
Rift Valley	Formed by faulting, where land sinks	East African Rift, Narmada Valley	Common in tectonically
			active zones
Delta	Triangular deposit at river mouth	Ganga-Brahmaputra Delta	Largest delta in the world;
			formed by deposition
Moraine	Deposits left by glaciers	Terminal, lateral, medial moraines	Common in glaciated
			regions like Himalayas
Sand Dunes	Wind-deposited mounds of sand	Found in deserts (Thar Desert)	Barchans are crescent-
			shaped dunes
Karst	Landscape formed by chemical	Stalactites, stalagmites, sinkholes	Found in areas like
Topography	weathering of limestone		Meghalaya (India),
			Slovenia

Landforms

Type of	Formation Agent	Sub-Types / Features	Key Examples	SSC-Relevant Facts
Landform				
Mountains	Endogenic (internal tectonic forces)	- Fold Mountains (formed by compression) - Block Mountains (formed by faulting) - Volcanic Mountains (from volcanism)	- Fold: Himalayas, Andes - Block: Vosges (France), Sierra Nevada (USA) - Volcanic: Mt. Kilimanjaro, Mt. Fuji	 ※ Himalayas – youngest, highest ※ Aravallis – oldest fold mountains ※ Andes – longest mountain chain
Plateaus	Uplift due to endogenic forces or lava flow	Elevated flat-topped areas; may be dissected or volcanic	- Deccan Plateau (India) - Colorado Plateau (USA) - Tibet Plateau (world's highest)	 ☆ Tibet – "Roof of the World" ☆ Deccan – formed by volcanic lava ☆ Often rich in minerals
Plains	Exogenic agents (rivers, wind, glaciers)	Flat and low-lying, fertile due to deposition	- Indo-Gangetic Plain - Great Chinese Plain	 ✗ Most densely populated regions ✗ Ideal for agriculture ✗ Formed by alluvial deposition
Deserts	Wind (Aeolian)	- Erg: Sand seas- Reg: Stony deserts- Dunes: Barchans, Seif dunes	- Thar (India), Sahara (Africa), Gobi (Asia)	常 Barchans:Crescent-shaped dunes常 Found in rain shadow zones
Valleys	Rivers or Glaciers	- V-shaped (river)- U-shaped (glacier)- Rift Valleys (faulting)	- Ganga Valley (V-shaped) - Kashmir Valley (U-shaped) - Narmada Rift Valley	Rift valleys = Block mountains & faults River valleys = Agricultural zones
Delta	Deposition by rivers at mouth	Triangular or fan-shaped depositional land	- Ganga-Brahmaputra Delta (India/Bangladesh) - Nile Delta	 ☼ Ganga- Brahmaputra: World's largest delta ☼ Rich in sediments and biodiversity



Canyons /	River erosion in hard	Deep, narrow valleys with steep	- Grand Canyon (USA)	🗱 Kali Gandaki –
Gorges	rock areas	sides	- Kali Gandaki Gorge (Nepal)	deepest gorge
				\$\$ Shows river's
				erosional power
Glacial	Glacier erosion and	- Cirque, Arete, Horn, Moraines,	- Moraines in Himalayas	X Moraines =
Landforms	deposition	Drumlin	- Fjords in Norway	glacial deposits
		- Fjords (submerged glacial		🗱 U-shaped valleys,
		valleys)		Horn peaks
				(Matterhorn)
Karst	Chemical weathering of	Sinkholes, caves, stalactites,	- Meghalaya (India), Slovenia,	🗱 Features formed
Landforms	limestone (carbonation)	stalagmites	Karst Plateau	by underground
				water
				🗱 Stalactites
				(ceiling), Stalagmites
				(floor)
Coastal	Sea waves and tides	- Cliffs, sea caves, arches, stacks,	- Marina Beach (India), Durdle	🗱 Formed by
Landforms		beaches	Door (UK)	marine
				erosion/deposition
				🗱 Constantly
				changing by wave
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Aeolian	Wind erosion and	Mushroom rocks, yardangs,	- Thar Desert, Sahara Desert	Wind is active in
Landforms	deposition	dunes		arid/semi-arid zones
Lacustrine	Formed in or around	Lakes, oxbow la <mark>kes, la</mark> ke	- Dal Lake (India), Lake	💸 Oxbow lakes =
Landforms	lakes	terraces	Victoria (Africa)	old river meanders









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