

GATE 2020 GEOLOGY TEST SERIES SCHEDULE

TEST SERIES FOR PART-I (COMMON FOR GEOLOGY AND GEOPHYSICS)

Test No.	Syllabus	Date
Test – 1	1. Earth and Planetary system - size, shape, internal structure and composition of the earth; concept of isostasy; 2. Elements of seismology – body and surface waves, propagation of body waves in the earth's interior; 3. Gravitational field of the Earth; 4. Geomagnetism and paleomagnetism;	4 Sept 2019
Test – 2	1. Continental drift; 2. Plate tectonics – relationship with earthquakes, volcanism and mountain building; 3. Continental and oceanic crust – composition, structure and thickness.	11 Sept 2019
Test – 3	1. Weathering and soil formation; 2. Landforms created by river, wind, glacier, ocean and volcanoes.	18 Sept 2019
Test – 4	Combined syllabus of tests 1, 2 and 3	25 Sept 2019
Test – 5	1. Basic structural geology - stress, strain and material response; brittle and ductile deformation; nomenclature and classification of folds and faults.	2 Oct 2019
Test – 6	1. Crystallography – basic crystal symmetry and concept of point groups. 2. Mineralogy – silicate crystal structure and determinative mineralogy of common rock forming minerals.	9 Oct 2019
Test – 7	1. Petrology – mineralogy and classification of common igneous, sedimentary and metamorphic rocks.	16 Oct 2019
Test – 8	Combined syllabus of tests 5, 6 and 7	23 Oct 2019
Test – 9	1. Geological time scale - geochronology and absolute time. Stratigraphic principles; major stratigraphic divisions of India.	30 Oct 2019
Test – 10	1. Geological and geographical distribution of mineral, coal and petroleum resources of India.	6 Nov 2019
Test – 11	1. Engineering properties of rocks and soils. 2. Ground water geology.	13 Nov 2019

Test – 12	Combined syllabus of tests 9, 10 and 11	20 Nov 2019
Test – 13	1. Introduction to remote sensing. 2. Introductory well logging.	27 Nov 2019
Test – 14	1. Principles and applications of gravity, magnetic, electrical, electromagnetic, seismic and radiometric methods of prospecting for oil, mineral and ground water;	4 Dec 2019
Test – 15	Combined syllabus of tests 13 and 14	11 Dec 2019
Test – 16	1. FULL SYLLABUS TEST 1	18 Dec 2019
Test – 17	2. FULL SYLLABUS TEST 2	25 Dec 2019

TEST SERIES FOR PART-II (FOR GEOLOGY ONLY)

Test No.	Syllabus	Date
Test – 1	<u>Geomorphology</u> 1. Geomorphic processes and agents; 2. development and evolution of landforms; 3. slope and drainage; processes in deep oceanic and near-shore regions; 4. quantitative and applied geomorphology.	4 Sept 2019
Test – 2	<u>Structural Geology</u> 1. Mechanism of rock deformation; 2. primary and secondary structures; 3. geometry and genesis of folds, faults, joints and unconformities; cleavage, schistosity and lineation; 4. methods of projection; tectonites and their significance; 5. shear zones; 6. superposed folding; basement-cover relationship.	11 Sept 2019
Test – 3	<u>Crystallography and Mineralogy</u> 1. Crystallography - symmetry, forms and twinning; 2. crystal chemistry;	18 Sept 2019

	3. optical mineralogy, classification of minerals, diagnostic physical and optical properties of rock - forming minerals.	
Test – 4	Combined syllabus of tests 1, 2 and 3	25 Sept 2019
Test – 5	<u>Geochemistry</u> <ol style="list-style-type: none"> 1. Cosmic abundance of elements; 2. meteorites; 3. geochemical evolution of the earth; 4. geochemical cycles; distribution of major, minor and trace elements in crust and mantle; elements of geochemical thermodynamics; 5. isotope geochemistry; 6. geochemistry of waters including solution equilibria and water-rock interaction. 	2 Oct 2019
Test – 6	<u>Igneous Petrology</u> <ol style="list-style-type: none"> 1. Igneous rocks – classification, forms and textures; 2. magmatic differentiation; 3. binary and ternary phase diagrams; 4. major and trace elements as monitors of partial melting and magma evolutionary processes. 	9 Oct 2019
Test – 7	<u>Sedimentary Geology</u> <ol style="list-style-type: none"> 1. Sedimentary rocks – texture and structure; 2. sedimentary processes and environments, sedimentary facies, provenance and basin analysis. 	16 Oct 2019
Test – 8	Combined syllabus of tests 5, 6 and 7	23 Oct 2019
Test – 9	<u>Paleontology</u> <ol style="list-style-type: none"> 1. Morphology, classification and geological significance of important invertebrates, vertebrates, plant fossils and microfossils. 	30 Oct 2019
Test – 10	<u>Stratigraphy</u> <ol style="list-style-type: none"> 1. Principles of Stratigraphy and concepts of correlation – lithostratigraphy, biostratigraphy and chronostratigraphy. 	6 Nov 2019
Test – 11	<u>Indian Stratigraphy</u> <ol style="list-style-type: none"> 1. Indian stratigraphy – Precambrian and Phanerozoic. 2. Overview of Himalayan Geology. 3. Igneous and metamorphic provinces and important sedimentary basins of India. 	13 Nov 2019

Test – 12	Combined syllabus of tests 9, 10 and 11	20 Nov 2019
Test – 13	<u>Ore Geology - 1</u> Ore-mineralogy and optical properties of ore minerals; 1. ore forming processes vis-à- vis ore-rock association (magmatic, hydrothermal, sedimentary, supergene and metamorphogenic ores); 2. fluid inclusions as an ore genetic tool. 3. Coal and petroleum geology; marine mineral resources.	27 Nov 2019
Test – 14	<u>Ore Geology - 2</u> 1. Prospecting and exploration of economic mineral deposits - sampling, ore reserve estimation, geostatistics, mining methods. Ore dressing and mineral economics.	4 Dec 2019
Test – 15	<u>Indian Mineral Deposits</u> 1. Origin and distribution of mineral, fossil and nuclear fuel deposits in India.	
Test – 16	Combined syllabus of tests 13, 14 and 15	11 Dec 2019
Test – 17	<u>Engineering Geology</u> 1. Engineering properties of rocks and soils; rocks as construction materials; 2. role of geology in the construction of engineering structures including dams, tunnels and excavation sites; 3. natural hazards.	18 Dec 2019
Test – 18	<u>Hydrogeology</u> 1. Ground water geology – exploration, well hydraulics and water quality.	25 Dec 2019
Test – 19	<u>Remote Sensing</u> 1. Basic principles of remote sensing – energy sources and radiation principles, atmospheric absorption, interaction of energy with earth's surface, aerial-photo interpretation, multispectral remote sensing in visible, infrared, thermal IR and microwave regions, digital processing of satellite images.	1 Jan 2020
Test – 20	<u>GIS</u> 1. GIS – basic concepts, raster and vector mode operations.	8 Jan 2020
Test – 21	Combined syllabus of tests 17, 18 and 19	15 Jan 2019
Test – 22	FULL SYLLABUS TEST 1	22 Jan 2019
Test – 23	FULL SYLLABUS TEST 2	29 Jan 2019