

REG REVIEW ASSESSMENT OF FG/PG TEST BLUEPRINT FROM ASBOG®
TASK ANALYSIS - Revised October, 2023

Priority % # Questions				REG REVIEW, Inc.	
FG %/ FG #	PG %/ PG #	Com- bined %		Chapter in Study	Covered in Course
17%/ #23.8	17%/ #18.7	17	A. General Geology & Geological Investigations: <i>Surface and Subsurface Exploration Techniques and Interpretations; Geologic and Geophysical Tools, Application, and Interpretation; Earth Processes; Surface and Subsurface Mapping and Map Applications; Geologic Section Construction; Photogrammetry, terrain measurement, GPS, and GIS; Remote Sensing; Image Analysis and interpretation; Scale and Scale Analysis; Measurement theory, accuracy and precision; Geostatistics; Documentation and record keeping; Modeling concepts; Professionalism and ethics; QA/QC. Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct geological investigations considering public health, safety, and welfare, the environment, regulations, and Quality Assurance/Quality Control (QA/QC)	7,10	√
			Compile and organize available information to plan geological investigations		√
			Collect, describe and record new geological and geophysical data	7, 9,10	√
			Determine positions, scales, distances, and elevations from remote sensing, imagery, surveys, sections, maps and GIS	3	√
			Prepare, analyze, and interpret logs, sections, maps and other graphics derived from field and laboratory investigations	2,3,7	√
12%/ #16.8	5%/ # 5.5	8.5	B. Mineralogy, Petrology, & Geochemistry: <i>Rock and Mineral Identification; Crystal symmetry, systems, and forms; Igneous rocks and processes; Sedimentary rocks and processes; Metamorphic rocks and processes; Geochemical reactions and diagenesis; QA/QC. Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct mineralogic, petrologic, and geochemical investigations, including the use of field, laboratory, and analytical techniques	6	√
			Identify minerals and rocks and their characteristics	5	√
			Identify and interpret rock and mineral sequences and associations, and their genesis	5,6	√
			Evaluate geochemical and isotopic data, and construct geochemical models related to rocks and minerals		√
			Determine type, degree, and effects of rock and mineral alteration	5	√
11%/ #15.4	5%/ #5.5	8	C. Sedimentology, Stratigraphy, & Paleontology: <i>Stratigraphic principles; Weathering, erosion, transport, and deposition; Depositional environments; Facies analysis; Basin analysis; Sedimentary structures; Diagenesis; Geologic time; Geochronology; Fossil record and evolution; QA/QC. Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct sedimentologic, stratigraphic, or paleontologic investigations, including the use of field, laboratory, and analytical techniques		√
			Select and apply appropriate stratigraphic nomenclature and establish correlations	3	√
			Identify and interpret sedimentary processes and structures, depositional environments, sediment provenance, and geochemical and climatic cycles	3,4	√
			Identify and interpret sediment and/or rock sequences, positions, and ages, and interpret sequence stratigraphy	3,5	√
			Identify fossils and interpret fossil assemblages for age, paleoenvironmental interpretations, and/or stratigraphic correlations	5	√
14%/ #19.6	8%/ #8.8	11	D. Geomorphology, Surficial Processes & Quaternary Geology: <i>Geomorphic Processes; Landform analysis techniques; Sea and Lake level change; Glaciation; Weathering; Sediment transport; Groundwater and surface water; Low temperature geochemistry; Human-land interaction; Soil development and classification; Remote sensing; GIS; QA/QC. Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct geomorphic investigations, including the use of field, laboratory, and analytical techniques	4,10	√
			Identify, classify, and interpret landforms, surficial materials, and processes	4,12	√
			Determine relative or absolute age relationships of landforms, sediments, and soils	3,4	√
			Evaluate geomorphic processes and development of landforms, sediments, and soils, including watershed processes	4	√
			Apply remote sensing and GIS techniques to interpret geomorphic conditions and processes	3, 4	√

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12%/ #16.8	9%/ #9.9	10.5	E. Structure, Tectonics, & Seismology: <i>Fractures, faults, and folds; Rock fabric; Rock mechanics; Structural Analysis; Plate tectonics; Tectonic regimes; Volcanism; Structural and seismic history; Paleoseismology; Earthquake processes; QA/QC. Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct structural, tectonic, or seismic investigations, including the use of field, laboratory, and analytical techniques	2,10,12	√
			Identify and define structural features and relationships to construct and interpret cross sections and structural projections and perform statistical analyses	2	√
			Interpret deformational history through structural and tectonic analyses	2,3	√
			Develop and apply tectonic models to identify geologic processes and history		√
			Evaluate earthquake mechanisms and paleoseismic history	12	√
13%/ #18.2	22%/ #24.2	17.5	F. Hydrogeology: <i>Groundwater and surface water systems and processes; Aquifer characterization; Hydrogeologic modeling; Low temperature aqueous geochemistry; Contaminant transport and geochemistry; Isotopic and tracer studies; Hydraulic properties of fluids and earth materials; Site investigation methods, tools, and applications; Geophysical techniques; Landform analysis; Weathering; QA/QC. Well drilling; well design and construction; Soil and water remediation techniques; water resources management and protection; Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct hydrogeological, geochemical, and contaminant investigations, including the use of field, laboratory, and analytical techniques	8,9,10	√
			Define and characterize hydraulic properties of vadose and saturated zones	8	√
			Design groundwater monitoring, observation, extraction, production, or injection wells	7,8	√
			Evaluate water resources, assess aquifer yield, and determine sustainability	7	√
			Characterize soil and water quality, and assess chemical fate and transport	9	√
			Manage, develop, protect, or remediate surface water or groundwater resources		√
12%/ #16.8	18%/ #19.8	15	G. Engineering Geology: <i>Landform analysis techniques; Soil and rock weathering; Groundwater and surface water systems and processes; Low temperature geochemistry; Human-land interaction; Soil and rock mechanics; Soil and rock classification and engineering properties; Geologic hazards; Hazard and risk analyses; Cost/benefit analyses; Site investigation methods, tools, and applications; Geophysical techniques; QA/QC. Land restoration and hazard mitigation; Mine closure; Image analysis and interpretation; Remote sensing; GIS; Earth and rock construction methods; In-situ and laboratory testing; Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct engineering geologic investigations, including the use of field and laboratory methods	10, 11, 13	√
			Identify and characterize physical and index properties of earth materials	4,7	√
			Provide recommendations for engineering design, land use decisions, environmental restoration, and watershed management	11,13	√
			Identify, map, and evaluate geologic hazards and processes	3,4,12	√
			Interpret land use, landforms, and geological site characteristics using remote sensing data, maps, records, and GIS	3,4	√
			Develop plans, interpretations, and recommendations for ground behavior during infrastructure development or hazard mitigation	12,13	√
9%/ #12.6	16%/ #17.6	12.5	H. Economic Geology & Energy Resources: <i>Exploration and development techniques; Geophysical techniques; Petrophysical techniques; Geochemical analysis; Geostatistical analysis; Mineralization processes, Characteristics of mineral deposits; Energy resource systems; Characteristics of hydrocarbon traps; Industrial minerals, coal, and earth materials; Exploration risk and economics; Resource/Reerve assessment; Safety hazards and risk analysis; Professionalism and ethics; QA/QC. Exploration drilling techniques; Drill program design and management; Assaying; Land restoration and hazard mitigation; Mine and well decommissioning; Project planning, management, organization, and economics (PG Only)</i>		
			Plan and conduct resource exploration, evaluation, and reclamation programs, including the use of conceptual models, and field, laboratory, and analytical techniques	6,10	√
			Compile and interpret the data necessary to locate mineral or energy resources	5,6	√
			Determine the presence and distribution of resources based on surface and subsurface data	3,7	√
			Perform economic evaluation and reserve assessment	6	√
			Calculate quantity and quality of resources	12	√
			Conduct geological studies for design, abandonment, closure, waste management, and reclamation and restoration of energy development or mineral extraction operations		√
100%/ #140	100%/ #110	100%			