

Earth Sciences (BSc) final oral examination topics/themes

- 1.a. The origin and formation of the Solar System. The characteristics of the gas giants.
- 1.b. Tectonic position and structure of the Pannonian Basin in the Alpine system

- 2.a. The composition and structure of the Earth
- 2.b. Earth history during the Pliocene and Quaternary

- 3.a. The structure of the lithosphere
- 3.b. Late Miocene–Early Pliocene history of Europe

- 4.a. Systematic mineralogy
- 4.b. Earth history during the Miocene: events of the Alpine tectonic cycle, evolution of the biota, atmosphere and climate.

- 5.a. Systematic petrology and the rock cycle
- 5.b. Earth history during the Paleogene: events of the Alpine tectonic cycle, evolution of the biota, atmosphere and climate.

- 6.a. Global plate tectonics and the Wilson cycle
- 6.b. Earth history during the Cretaceous: events of the Alpine tectonic cycle, evolution of the biota, atmosphere and climate.

- 7.a. Characteristics of the hydrosphere; the hydrologic cycle.
- 7.b. Earth history during the Jurassic: events of the Alpine tectonic cycle, evolution of the biota, atmosphere and climate.

- 8.a. Structure and composition of the atmosphere.
- 8.b. Earth history during the Triassic: events of the Alpine tectonic cycle, evolution of the biota, atmosphere and climate.

- 9.a. The elements of the climate system. Processes affecting the climate. The pattern of the climate zones. The greenhouse effect.
- 9.b. Earth history during the Late Paleozoic: the Variscan orogeny, evolution of the biota, atmosphere and climate.

- 10.a. General circulation system of the atmosphere and the oceans.
- 10.b. Earth history during the Early Paleozoic: the Caledonian orogeny, evolution of the biota, atmosphere and climate

- 11.a. Physical geographical units and drainage network of Europe
- 11.b. Earth history during the Precambrian era: formation and evolution of the continental lithosphere

- 12.a. Paleoclimatic reconstruction (ice cores, sediments, tree rings, etc.). Climate modelling.
- 12.b. Earth history during the Precambrian era: composition and evolution of the atmosphere; early evolution of the biosphere

- 13.a. Igneous petrology: system of igneous rocks, characteristics of their texture and structure
- 13.b. Mass extinction events in earth history

- 14.a. Igneous provinces and plate tectonics
- 14.b. The development of Earth's atmosphere across geologic time

- 15.a. Weathering, sedimentary processes, characteristics and systematics of sedimentary rocks
- 15.b. Icehouse climates in earth history

- 16.a. Pedogenesis and soil types
- 16.b. Main stages of the evolution of life on Earth

- 17.a. Clastic sediments and sedimentary rocks
- 17.b. Geological hazards (with recent and past examples)

- 18.a. Carbonate sediments and sedimentary rocks
- 18.b. The role of geology in nature conservation and environmental protection

- 19.a. Marine depositional environments
- 19.b. Ore genesis and ore types

- 20.a. Terrestrial sedimentary environments
- 20.b. Origin and characterization of hydrocarbons

- 21.a. Metamorphism; characteristics and system of metamorphic rocks
- 21.b. Industrial and construction mineral resources

- 22.a. Stratigraphy: types, methods and tools
- 22.b. Aquifers and groundwater utilization: case studies

- 23.a. Research methods in geology; geological maps
- 23.b. Types of volcanic activity and associated phenomena

- 24.a. Geophysical research methods
- 24.b. Tasks of environmental geology: case studies