



**PUNJAB PUBLIC SERVICE COMMISSION**  
**COMBINED COMPETITIVE EXAMINATION**  
**FOR RECRUITMENT TO THE POSTS OF**  
**PROVINCIAL MANAGEMENT SERVICE -2020**

**SUBJECT: GEOLOGY (PAPER-I)**

**TIME ALLOWED: THREE HOURS**

**MAXIMUM MARKS: 100**

**NOTE:**

- i. All the parts (if any) of each Question must be attempted at one place instead of at different places.
- ii. Write Q. No. in the Answer Book in accordance with Q. No. in the Q. Paper.
- iii. No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
- iv. Extra attempt of any question or any part of the question will not be considered.

**Attempt FIVE Questions in all. Attempt in Urdu or English.**

*Where necessary, use neat sketches to elaborate the answers.*

- Q No.1:** Discuss the different hypotheses and theories explaining the origin of the Earth and the Solar System. **(20 Marks)**
- Q No.2:** Discuss the major classifications of folds and what are the two types of geologic structures involved in creating mountains like the Himalayas? **(20 Marks)**
- Q No.3:** Briefly discuss the various Taphonomic and Diagenetic Processes with examples. **(20 Marks)**
- Q No.4:** How does the theory of Plate Tectonics explain the formation and deformation of the Earth's surface? Also discuss where crust is being created, destroyed, or remains unchanged. **(20 Marks)**
- Q No.5:** Discuss the various physical and chemical weathering processes involved in the formation of sedimentary rocks. **(20 Marks)**
- Q No.6:** Why Salt Range of Pakistan is called field museum of geology? Also Explain Permian and Mesozoic rocks exposed in the Salt Range area with their characteristic features. **(20 Marks)**
- Q No.7:** Discuss the various physical and chemical properties of minerals. **(20 Marks)**
- Q No.8: Write a short note on the following:** **(4x5=20 Marks)**
- a) Bowen's Reaction Series (BRS)
  - b) Micro and Macro Evolution
  - c) Plutonic Rocks
  - d) Geochemical Cycles



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**SUBJECT: GEOLOGY (PAPER-II)**

**TIME ALLOWED: THREE HOURS**

**MAXIMUM MARKS: 100**

**NOTE:**

- i. All the parts (if any) of each Question must be attempted at one place instead of at different places.
- ii. Write Q. No. in the Answer Book in accordance with Q. No. in the Q. Paper.
- iii. No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
- iv. Extra attempt of any question or any part of the question will not be considered.

**Attempt FIVE Questions in all. Attempt in Urdu or English.**

- Q No. 1:** Describe the theories regarding the Origin of Earth, also describe the Internal Structure of the Earth. **(20 Marks)**
- Q No. 2:** Define Drainage Pattern and discuss different types of drainage patterns. **(20 Marks)**
- Q No.3:** Describe the followings, **(20 Marks)**  
a) Earth Satellite Systems for remote sensing  
b) Principals of Stratigraphy
- Q No. 4:** Describe the scientific reasons for climate changing phenomenon and discuss the theories regarding climate change. **(20 Marks)**
- Q No. 5:** Describe fossil, fossilization and discuss the modes of fossil preservation. **(20 Marks)**
- Q No. 6:** Differentiate between fracture and joint, and describe the Genetic Classification of Joints. **(20 Marks)**
- Q No.7:** Define Igneous Rocks and describe the classification of Igneous Rocks, with examples, on the basis of chemical composition. **(20 Marks)**
- Q No. 8:** Write notes on the followings:- **(4x5=20 Marks)**  
a) Dam site investigation  
b) Uranium and Strategic metals  
c) Clastic Sedimentary Rocks  
d) Geothermal Energy