



PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC -2022
CASE NO. 2C2023

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.

NOTE: Attempt Five Questions in all. Attempt in Urdu or English.
Where necessary, use neat sketches to elaborate the answers

Q No. 1: What is geomorphology? Briefly discuss the role of exogenic and endogenic geomorphic process in shaping the earth.

(20 Marks)

Q No. 2: Describe stress, stress Ellipse and stress Ellipsoid. Discuss the Mohr Stress Diagram.

(20 Marks)

Q No. 3: What are the parameters that are most commonly used to characterize the structure of paleo-communities, and which of parameters are most likely to be influenced by Taphonomic processes?

(20 Marks)

Q No. 4: Define sedimentary environments and discuss the basic tools of environmental analysis.

(20 Marks)

Q No. 5: Define the different types of rocks. Discuss the mineralogical composition, texture, origin, and uses of Granite, Limestone, Marble and Schist.

(20 Marks)

Q No. 6: Differentiate between high-temperature and low-temperature geochemistry. Also discuss the applications of geochemical thermodynamics in geology.

(20 Marks)

Q No. 7: Write short notes on:

(5×4=20 Marks)

- a. Earth Crust
- b. Evaporites
- c. Metamorphic grades
- d. Laccolith and Phacolith

Q No. 8: Discuss the geochemistry of weathering and point out the basic reactions therein.

(20 Marks)



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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.

NOTE: **Attempt any FIVE Questions in all. Attempt in Urdu or English.**

- Q No. 1:** What is plate tectonics? Write a comprehensive note on plate boundaries. **(20 Marks)**
- Q No. 2:** What are natural resources? Explain value and types of natural resources. Describe briefly uses of natural resources. **(20 Marks)**
- Q No. 3:** Which type of analysis is required for dam site investigation? **(20 Marks)**
- Q No. 4:** What is a landslide? Explain the types of land slides and the factors that trigger landslides. **(20 Marks)**
- Q No. 5:** Which point you should keep in mind while evaluating the Overlay operation (Vector data)? **(20 Marks)**
- Q No. 6:** What is coordination system? Define latitude and longitude and also explain the difference between projected coordinate system and graphic coordinate system. **(20 Marks)**
- Q No. 7:** Discuss the impact of climate changes in Pakistan during last two decades. **(20 Marks)**
- Q No. 8:** Sandstone makes up about one-fourth of the total volume of sedimentary rocks. Describe major framework component of the Sandstone. Discuss characteristics of the major classes of Sandstone. **(20 Marks)**
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