



PUNJAB PUBLIC SERVICE COMMISSION
COMBINED COMPETITIVE EXAMINATION
FOR RECRUITMENT TO THE POSTS OF
PROVINCIAL MANAGEMENT SERVICE, ETC -2021
CASE NO. 3C2022

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: Define faults and discuss the ways they can be classified. Also differentiate between slickensides and fault breccia.

(20 Marks)

Q No. 2: What parameters are most commonly used to characterize the structure of paleo-communities, and which of these parameters are likely to be influenced by Taphonomic Processes?

(20 Marks)

Q No. 3: Describe in detail about sedimentary facies and their role in understanding depositional environments.

(20 Marks)

Q No. 4: What is unconformity? What are the three types of unconformities and how do they form?

(20 Marks)

Q No. 5: Describe the following **(10+10=20 Marks)**
i- Magmatic ore deposits
ii- Polymorphism and crystal habit

Q No. 6: Define the different types of rocks. Discuss the mineral composition, texture, origin, and uses of Granite, Limestone, Marble and Schist.

(20 Marks)

Q No. 7: Differentiate between rare earth and trace elements. Discuss about the significance of rare earth elements in understanding geochemical evolution of mantle and crust.

(20 Marks)

Q No. 8: Write a short note on the following: **(4 x 5 = 20 Marks)**

- i- Interior of the Earth
- ii- Nebular Hypothesis
- iii- Physical Properties of Minerals
- iv- Applications of GIS in Geology



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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:** Discuss Geology of the Permian Sequence of the Salt Range of the Pakistan? (20 Marks)
- Q No. 2:** Define basin? Describe different types of basin margins with examples? (20 Marks)
- Q No. 3:** Describe the following: (10+10=20 Marks)
- a. Internal structure of Earth
 - b. Remote sensing and GIS significance in geology
- Q No. 4:** What is fault and its framework? Explain it with the help of sketches. Discuss Different types of faults and their characteristic features? (20 Marks)
- Q No. 5:** Explain the classification of sandstone and their characteristic features? (20 Marks)
- Q No. 6:** What is continental drift theory? Explain it with the help of different evidences? (20 Marks)
- Q No. 7:** Define Dam and its types? Discuss geological investigations for the selection of a dam-site? (20 Marks)
- Q No. 8:** Write short notes on following: (5X4=20 Marks)
- a. Cross bedding
 - b. Geothermal energy
 - c. Igneous rocks
 - d. landslides