



**FEDERAL PUBLIC SERVICE COMMISSION**  
**COMPETITIVE EXAMINATION-2021**  
**FOR RECRUITMENT TO POSTS IN BS-17**  
**UNDER THE FEDERAL GOVERNMENT**

Roll Number

**GEOLOGY**

**TIME ALLOWED: THREE HOURS**

**PART-I(MCQS): MAXIMUM 30 MINUTES**

**PART-I (MCQS) MAXIMUM MARKS = 20**

**PART-II MAXIMUM MARKS = 80**

- NOTE:** (i) **Part-II** is to be attempted on the separate **Answer Book**.  
(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH SECTION**. **ALL** questions carry **EQUAL** marks.  
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.  
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.  
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.  
(vi) Extra attempt of any question or any part of the question will not be considered.

**PART – II**  
**SECTION – I**

- Q. No. 2.** Classify pyroxene group of minerals based on chemical composition. Also mention their physical and optical properties. (20)
- Q. No. 3.** Elaborate various laws of stratigraphy, use suitable sketches/examples in support of your answer. (20)
- Q. No. 4.** Elaborate the fundamental silica tetrahedral structure ( $\text{SiO}_4$ ). Give possibilities of  $\text{SiO}_4$  linkage to give rise to six silicate structural groups. (20)
- Q. No. 5.** Describe the test compositions of order Foraminiferida. Discuss their ecology and how it plays important role in Tertiary biostratigraphy. (20)

**SECTION-II**

- Q. No. 6.** Elaborate characteristics of effective trap-rocks. Describe principal types of hydrocarbon traps with examples. (20)
- Q. No. 7.** What are the possible causes of land sliding in the northern mountainous region of Pakistan and how it can be reduced? (20)
- Q. No. 8.** Write short notes on any TWO of the following: (10 each) (20)
- (a) Geothermal energy
  - (b) Eustatic curve
  - (c) Physical weathering

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