



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

Roll Number

**GEOLOGY**

<b>TIME ALLOWED: THREE HOURS</b> <b>PART-I(MCQS): MAXIMUM 30 MINUTES</b>	<b>PART-I (MCQS) MAXIMUM MARKS = 20</b> <b>PART-II MAXIMUM MARKS = 80</b>
<b>NOTE: (i) Part-II is to be attempted on the separate Answer Book.</b> <b>(ii) Attempt ONLY FOUR questions from PART-II by selecting TWO questions from EACH SECTION. ALL questions carry EQUAL marks.</b> <b>(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.</b> <b>(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.</b> <b>(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.</b> <b>(vi) Extra attempt of any question or any part of the question will not be considered.</b>	

**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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