FEDERAL PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATION FOR
RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT, 2015

Roll Number

GEOLOGY, PAPER-I

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**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. 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) Candidate must 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 attempted question will not be considered.

PART-II

Q. No. 2. Discuss compositional variations between the end members and describe substitutions of the major cations in the feldspars, pyroxenes and olivines. **(20)**

Q. No. 3. Discuss the Primary clastic structures in sedimentary rocks. **(20)**

Q. No. 4. Explain the relationship between magma chemistry and the production of pyroclastic material and discuss the classification of pyroclastic rocks. **(20)**

Q. No. 5. What processes cause the origination of flood plains and how do they contribute to the development of floodplains? Also compare and contrast the Depositional and Erosional Terraces. **(20)**

Q. No. 6. Describe the nature of contacts in the stratigraphic record. Also discuss the types of grain size trends associated with transgression and regression. **(20)**

Q. No. 7. Discuss the Barrovian type metamorphism with the example from Indian plate margin in Kaghan valley. **(20)**

Q. No. 8. Write notes on any **TWO** of the following: **(10 each)** **(20)**

(a) Fauna of Permean Sequence of Salt Range
(b) Ditrigonal Scalenohedral Class or Calcite type.
(c) Sites of magma generation on the basis of tectonic setting

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GEOLOGY, PAPER-II

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**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. ALL** questions carry **EQUAL** marks.
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PART-II

Q. No. 2. Compare the geological conditions responsible for the formation of coal, oil, and natural gas. **(20)**

Q. No. 3. Discuss the Geological factors in hydro power projects. **(20)**

Q. No. 4. Discuss the Uranium mineralization in Siwalik fluvial depositional system of Pakistan. **(20)**

Q. No. 5. Give a detailed account of the types of landslides, the causative factors and the methods to prevent landslides. **(20)**

Q. No. 6. Discuss the various laboratory and field tests carried out to determine the engineering properties of rocks. **(20)**

Q. No. 7. Discuss the lithostratigraphic units of Salt range regarding the raw materials for cement industry. **(20)**

Q. No. 8. Write notes on any **TWO** of the following **(10 each)** **(20)**
(a) Path finders in geochemical exploration
(b) Evaporite mineral deposits
(c) C14 dating

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