FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2022
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

GEOLOGY

TIME ALLOWED: THREE HOURS **PART-I(MCQS): MAXIMUM 30MINUTES**	**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. Describe the principal of plate tectonic with evidences. Explain the Wilson cycle in detail. **(20)**

Q. No. 3. Explain the vertical stacking pattern and parasequences set. How does the vertical stacking pattern of parasequences allow for the recognition of systems tracts? **(20)**

Q. No. 4. Explain the tectonic framework of Pakistan with an example of Indian-Eurasian and Indian-African plate drifting. **(20)**

Q. No. 5. Describe Polarized Light Microscopy along with optical properties of opaque and non-opaque mineral? How to identify the Gout crystal and Pseudo-Gout? **(20)**

SECTION-II

Q. No. 6. Explain different geophysical methods such as gravity, magnetic, electrical resistivity, electromagnetic and seismic. Explain the application of each method, its strength and its limitations. **(20)**

Q. No. 7. What are the merits and demerits of refraction seismology, magnetic surveying, resistivity surveying and gravity to probe the depth of bedrock, bedrock lithology and crustal thickness? **(20)**

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

(a) Radioactivity and types with reaction

(b) Hadley cell, Ferrell cell and polar cell of air movement

(c) Sedimentary Basin of Pakistan

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