FEDERAL PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATION FOR RECRUITMENT TO POSTS IN BPS-17, UNDER THE FEDERAL GOVERNMENT, 2004

GEOLOGY, PAPER-I

TIME ALLOWED: THREE HOURS MAXIMUM MARKS: 100

NOTE: Attempt **FIVE** questions in all, including **Question No. 8** which is **COMPULSORY**. All questions carry **EQUAL** marks. Illustrate your answer with sketches where needed.

1. What methods are available to determine the age of the Earth? Describe its internal structure.

2. Discuss the origin of MAGMA in relation to plate tectonics. How different types of igneous rocks are formed from a single magma?

3. What is the significance of physical properties of minerals? Describe the PYROXENE group of minerals.

4. Define FORMATION. Describe the Tertiary sequence of strata in Sindh.

5. How do you classify FAULTS? Discuss the importance of CHAMAN FAULT in the geology of Pakistan.

6. How do you locate the epicenter of an earthquake? What measures are necessary for those areas of Pakistan which are seismically active?

7. Describe the morphology of CEPHALOPODS. What is their significance in the stratigraphy of Pakistan?

COMPULSORY QUESTION

8. Write very short notes on the following:

(1)	Turbidites	(2)	Asthenosphere
(3)	Pillow lava	(4)	Cross bedding
(5)	Continental Slope	(6)	Index fossil
(7)	Arkose	(8)	Enfoliation
(9)	Submarine fan	(10)	Kaolinite
(11)	Braided river	(12)	Main Mantle Thrust
(13)	Eclogite	(14)	Centre of symmetry
(15)	Marker bed	(16)	Syenite
(17)	Bireferengence	(18)	Globogerina
(19)	Phyllosilicate	(20)	Chert

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COMPETITIVE EXAMINATION FOR RECRUITMENT TO POSTS IN BPS-17, UNDER THE FEDERAL GOVERNMENT, 2004

GEOLOGY, PAPER-II

TIME ALLOWED: THREE HOURS MAXIMUM MARKS: 100

NOTE: Attempt **FIVE** questions in all, including **Question No. 8** which is **COMPULSORY**. All questions carry **EQUAL** marks. Illustrate your answer with sketches where needed.

1. What is a PORPHYRY Copper deposit? Describe the geology of SAINDAK area.

2. Describe the ranks of Coal. What are the problems of Utilization of THAR Coal?

3. What geological factors must be considered in the selection of sites for DAMS? Discuss the silting problem in Mangla and Tarbela.

4. Explain the DARCY Law. Can groundwater exploration be an alternate to Kalabagh Dam?

5. Describe the structure and stratigraphy of SUI gas field. What are the advantages and disadvantages of an international gas pipeline to Pakistan?

6. Discuss two common geophysicas techniques employed in the exploration of oil and for groundwater.

7. What factors are responsible for LANDSLIDES? How will you stabilize a frequently sliding mass of shales and mudstones?

COMPULSORY QUESTION

8. Write very short notes on the following:

(1)	Artesian Well	(2)	Cable tool drilling
(3)	Talethermal deposits	(4)	Ceramic minerals
(5)	Tar sands	(6)	Water logging
(7)	Karez	(8)	Lapidary
(9)	Bouger anamoly	(10)	Vitrinite
(11)	Stratigraphic traps	(12)	Geophones
(13)	Sour gas	(14)	Aquitards
(15)	Formation Pressure	(16)	Pile Foundation
(17)	Onyx	(18)	Resistivity log
(19)	Compressive strength	(20)	Decorative stones

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