Name: **Enrolment No:**	

UPES

Supplementary Examination, December 2023

Course: Engineering Geology **Semester: III**

Program: B.Tech. Civil Engineering **Time: 03 hrs.**

Course Code: CIVL2014 **Max. Marks: 100**

Instructions: <u>All questions are compulsory to attempt.</u>

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1.	State the different types of faults with sketch.	**04**	**CO1**
Q 2.	Explain the different types of weathering.	**04**	**CO1**
Q 3.	State the various zones of groundwater.	**04**	**CO3**
Q 4.	What do you understand by geological folds and state its types.	**04**	**CO1**
Q 5.	Differentiate between permeability and porosity of rocks.	**04**	**CO3**

SECTION B
(4Qx10M= 40 Marks)

Q 6.	Explain the rock cycle in detail with the help of a figure.	**10**	**CO2**
Q 7.	A soil deposit has four layers having the same thickness, but the permeabilities of the layers are in the ratio of 1:2:4:8 from top to bottom. Calculate the equivalent permeability.	**10**	**CO3**
Q 8.	State the different types of seismic waves and explain how these waves are measured?	**10**	**CO3**
Q 9.	State the various geological considerations in the selection of a dam site.	**10**	**CO4**

SECTION-C
(2Qx20M=40 Marks)

Q 10.	Explain the characteristics of all the major types of rocks giving atleast three examples of each type?	**20**	**CO2**

Q 11.	What is the difference between radiometric methods and electrical methods? Explain each in detail clearly outlining the physics behind the two. Also list the advantages of geothermal methods. OR Explain in detail the various geophysical methods. Also clearly state the applicability of each of the methods in the geological domain.	**20**	**CO2**