

B.Sc. Semester-V Examination, 2022-23**GEOLOGY [Honours]**

Course ID : 52011 Course Code : SH/GEL/501/C-11(T)

Course Title : Hydrogeology

Time : 1 Hour 15 Minutes Full Marks : 25

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **five** of the following questions: $1 \times 5 = 5$
 - a) What is perched water table?
 - b) What is the full form of TDS?
 - c) Write a comprehensive equation through which the total water is cycled.
 - d) What is piezometric surface?
 - e) What is capillary water?
 - f) What is the ratio of fresh water to saline water in the Earth?
 - g) What is meteoric water?
 - h) Which radioisotopes are used for age determination of groundwater?

2. Answer any **two** of the following questions: $5 \times 2 = 10$
 - a) Derive the relationship between the porosity and void ratio.
 - b) Briefly describe the techniques of artificial recharge of groundwater.
 - c) Explain the Ghyben-Herzberg relation between fresh water and salt water in coastal aquifers.
 - d) Briefly describe the surface geological and geobotanical methods for groundwater exploration.
3. Answer any **one** of the following questions: $10 \times 1 = 10$
 - a) Describe different types of springs with necessary sketches.
 - b) Describe the arsenic pollution of groundwater with special emphases on causes, effects and control measures.

[Turn Over]