

SH-V/Geology-501C-11/19

B.Sc. 5th Semester (Honours) Examination, 2019-20

GEOLOGY

Course ID : 52011

Course Code : SHGEL-501C-11(T)

Course Title : Hydrogeology

Time: 1 Hour 15 Minutes

Full Marks: 25

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer *any five* of the following questions: 1×5=5
 - (a) What is the ratio of fresh water to saline water in the Earth?
 - (b) What is evapotranspiration?
 - (c) Which type of packing generates least porosity?
 - (d) Which radioisotopes are used for age determination of ground water?
 - (e) What is piezometric surface?
 - (f) What is effective porosity?
 - (g) What is storativity?
 - (h) What is specific retention?

2. Answer *any two* of the following questions: 5×2=10
 - (a) Briefly describe the techniques for artificial recharge of ground water.
 - (b) Diagrammatically represent the vertical distribution of subsurface water.
 - (c) Describe the surface geological and geobotanical methods for groundwater exploration.
 - (d) Explain the Ghyben-Herzberg relation between fresh water and salt water in coastal aquifers.

3. Answer *any one* of the following questions: 10×1=10
 - (a) Compare among aquifer, aquitard, aquiclude and aquifuge with examples.
 - (b) Describe the Darcy's law with its limitations for application to groundwater movement.