

**M.Sc. III Semester Degree Examination, April/May - 2024****APPLIED GEOLOGY****Hydrogeology****(NEP)**

Time : 3 Hours

Maximum Marks : 70

Note : Answer any five of the following Questions with question No.1 (Q1) Compulsory, each question carries equal marks.

1. Answer the following questions : **14**
 - (a) Define aquifer. Describe the water bearing properties of rocks.
 - (b) Discuss the scope of hydrogeological cycle.
2. Answer the following questions : **14**
 - (a) Give a detailed account on groundwater resource evaluation.
 - (b) Define Darcy's law and validate with experimental methods.
3. Answer the following questions : **14**
 - (a) Discuss the process of unsteady radial flow in unconfined aquifers.
 - (b) Explain the well loss and preventive measures.
4. Answer the following questions : **14**
 - (a) Discuss the specific yields in groundwater development.
 - (b) Describe the land subsidence with preventive measures.
5. Answer the following questions : **14**
 - (a) Explain the geochemical evolution of groundwater.
 - (b) Discuss the seawater intrusion.
6. Answer the following questions : **14**
 - (a) Discuss the origin and occurrences of geological formations of groundwater.
 - (b) Explain the hydraulic conductivity by using tracer techniques.
7. Answer the following questions : **14**
 - (a) Discuss the impact boundaries in aquifers.
 - (b) Explain the construction of shallow wells and deep wells.
8. Write a short note on : **14**
 - (a) Aquifer compressibility
 - (b) Types of aquifers
 - (c) Advantages of groundwater

