



QP CODE: 25022318



25022318

Reg No : .....

Name : .....

**M.Sc DEGREE (CSS) SPECIAL REAPPEARANCE EXAMINATION, APRIL 2025**

**Third Semester**

M.Sc GEOLOGY

**CORE - GL010304 - HYDROGEOLOGY**

2019 ADMISSION ONWARDS

379ED511

Time: 3 Hours

Weightage: 30

**Part A (Short Answer Questions)**

*Answer any **eight** questions.*

*Weight **1** each.*

1. Draw a neat sketch of Hydrological cycle.
2. What is phreatic zone?
3. What is specific Yield?
4. What is SP logging?
5. What is meant by climate change?
6. What is unsteady radial flow?
7. Which drilling methods are used in unconsolidated materials?
8. What are production wells?
9. What is pH of water ?
10. What are the major aquifers in Precambrian sedimentary province?

(8×1=8 weightage)

**Part B (Short Essay/Problems)**

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain field tests used to determine hydraulic conductivity.
12. Explain the hydrologic properties of rock.
13. Discuss the applications of Remote sensing in ground water exploration.
14. Explain electrical resistivity methods used for ground water investigations.
15. Explain Darcy's law and its verification methods.





16. Explain Pumping test and recovery test.
17. Explain Hill-Piper Trilinear diagram and its use.
18. Discuss groundwater management.

(6×2=12 weightage)

**Part C (Essay Type Questions)**

*Answer any **two** questions.*

*Weight 5 each.*

19. Elaborate various types of springs, and add a note on their occurrences in India.
20. Describe various types of shallow wells with neat sketch.
21. Explain the concept of ground water quality, and describe the Indian quality standards for drinking, irrigation and industrial waters.
22. Discuss in detail the methods and need for artificial recharge to aquifers.

(2×5=10 weightage)

