Turn Over

QP CODE: 24019220

Reg No : ..... Name : .....

# B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, MAY 2024

## **Second Semester**

B.Sc Geology and Water Management Model III

# Vocational Course - GW2VOT04 - GROUNDWATER EXPLORATION AND MANAGEMENT

2017 ADMISSION ONWARDS

7FB1337F

Time: 3 Hours

### Part A

# Answer any **ten** questions.

### Each question carries 2 marks.

- 1. Advantages and disadvantages of jetted wells.
- 2. Air rotary drilling method.
- 3. Infiltration galleries.
- 4. List out well development procedures.
- 5. Hydraulic jetting in well development.
- 6. Use of chemicals in well development.
- 7. Geomorphologic method in groundwater investigation.
- 8. Application of remote sensing in groundwater exploration.
- 9. Spontaneous potential logging.
- 10. Neutron logging.
- 11. Short note on water witching.
- 12. Explain losing stream and gaining stream.

(10×2=20)

### Part B

Answer any **six** questions.

Each question carries 5 marks.



Max. Marks : 80

- 13. Percussion drilling.
- 14. Collector wells.
- 15. Casing, cementing and screen in well completion.
- 16. Descibe surging with air in well development with a neat sketch.
- 17. Define electrical resistivity and various electrode arrangements for rasistivity determination with diagram.
- 18. Application of gravity and magnetic methods in groundwater exploration.
- 19. Various logging methods in groundwater exploration, explain geologic log and drilling time log.
- 20. Resistivity logging and caliper logging in groundwater investigation.
- 21. Describe various methods to determine groundwater level.

(6×5=30)

#### Part C

## Answer any **two** questions. Each question carries **15** marks.

- 22. Write an essay on horizontal wells.
- 23. Write an essay on well rehabilitation and development.
- 24. Describe various surface investigation methods of groundwater exploration.
- 25. Explain groundwater level measurements and describe Kerala groundwater control and regulation act 2003.

(2×15=30)