

S.No. 5441

16 SMBEGL 2

(For candidates admitted from 2016-2017 onwards)

B.Sc. DEGREE EXAMINATION, APRIL 2022.

Part III — Geology – Major Based Elective

HYDROGEOLOGY

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL the questions.

1. What is vadose zone?
2. What is aquitard?
3. What is specific retention?
4. What is permeability?
5. What is Jetted well?
6. What is Infiltration galleries?
7. What is cone of depression?
8. Define consumptive use of groundwater.

9. Write the physical parameters for the quality of groundwater.

10. Write any four water borne diseases.

PART B — ($5 \times 5 = 25$)

Answer ALL questions, choosing either (a) or (b).

11. (a) Describe the geological conditions favouring the development of springs.

Or

(b) Describe the types of groundwater based on its origin.

12. (a) Describe the Darcy's law and its applications.

Or

(b) Describe the groundwater movement.

13. (a) Explain the fluctuation of groundwater

Or

(b) Explain briefly the well development.

14. (a) Describe the causes and consequences of seawater intrusion.

Or

(b) Describe the Groundwater resources of Tamilnadu.

15. (a) Explain the groundwater quality in various rock types.

Or

(b) Describe the drinking water standards of WHO and BIS.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Elaborate on the types of aquifer with neat diagrams.

17. Enumerate on the rock properties affecting the groundwater.

18. Elucidate on the groundwater recharge methods.

19. Elaborate on the groundwater provinces of India.

20. Elaborate on the parameters considered for assessing groundwater quality.