

PE-526
(584) M.Sc. Geology (Fourth Semester)
Examination June 2022
Compulsory/Optional
HYDROGEOLOGY
Paper-III

Time: Three Hours

Maximum Marks: 080
Minimum Passing Marks:

नोट: दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note: Answer from both section as directed. The figures in the right-hand margin indicate marks.

SECTION-A

1. Answer the following questions- [1 X 10 = 10]
- (a) Define water table.
 - (b) What do you mean by hydrologic cycle?
 - (c) Define aquifer.
 - (d) Define porosity.
 - (e) Define water well.
 - (f) What do you mean by pumping test?
 - (g) What do you mean by ground water exploration?
 - (h) What is electrical resistivity method of ground water exploration?
 - (i) Name two ground water provinces of India.
 - (j) What are the norms for drinking water.

SECTION-B

2. Answer the following short questions:- [2 X 5 = 10]
- (a) Write a note on role of ground water in Hydrologic-cycle.
 - (b) Write a note on Darcy's law and its application.
 - (c) Write a note on water wells & their types.
 - (d) Write a note on application of remote sensing in ground water exploration.
 - (e) Write a note on conservation of ground water.

SECTION-C

- Answer the following questions:- [12 X 5 = 60]
3. Write a note on water table contour maps; their interpretations & use.
- Or,**
- Write a note on Hydrographs; data collection & analysis.
4. Define following terms:-
- (a) Aquifers, Aquitard, Aquiclude
 - (b) Porosity, Permeability, Specific Yield
- Or,**
- Define following terms:-
- (a) Specific retention, Storability, Transmissivity
 - (b) Steady flow, Unsteady flow, Leaky aquifers
5. Write an essay on well development completion.
- Or,**
- Write a note on pumping test.
6. Write a note on geological method of ground water exploration.
- Or,**
- Write a note on Electrical Resistivity Methods for ground water exploration.
7. Write a note on Ground Water Provinces of India.
- Or,**
- Write an essay on conservation of Ground Water.