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**6 SEM TDC GEO M 7**

**2 0 1 7**

( May )

**GEOLOGY**

( Major )

Course : 607

**( Hydrogeology and Oceanography )**

Full Marks : 48

Pass Marks : 19/14

Time : 2 hours

*The figures in the margin indicate full marks  
for the questions*

UNIT—25.1

**( Hydrogeology )**

( Marks : 36 )

1. Answer the following as directed : 1×3=3

- (a) An impermeable formation that neither contains nor transmits water is called \_\_\_\_\_ .

( Fill up the gap )

( 2 )

(b) In general, fine-grained rocks have high porosity and permeability.

( Write True or False )

(c) Water that is formed at the time of consolidation of magma is termed as \_\_\_\_\_.

( Fill up the gap )

2. Write on any *three* of the following :  $2 \times 3 = 6$

(a) Hydrologic cycle

(b) Specific yield and specific retention

(c) Piezometric surface

(d) Meteoric water

3. Write explanatory notes on any *two* of the following :  $3 \times 2 = 6$

(a) Coefficient of permeability and the factors controlling its value

(b) Quality of groundwater

(c) Zone of aeration

4. How is groundwater originated? Describe the hydrogeological properties of aquifers that effect the movement of groundwater. Write how groundwater is vertically distributed.

$2 + 4 + 2 = 8$

5. Write how springs are formed. Describe different types of springs with suitable diagram. Discuss briefly how rainwater harvesting is done. 1+2+5=8
6. Write a note on the problems of fluoride and arsenic contamination in groundwater. 5

UNIT—25.2

( **Oceanography** )

( Marks : 12 )

7. Fill in the blanks : 1×2=2
- (a) \_\_\_\_\_ century is known as the 'Golden Age of Oceanography'.
- (b) Ocean currents are caused by \_\_\_\_\_.
8. Write short notes on any *three* of the following : 2×3=6
- (a) Coral reefs
- (b) Oceanic trench
- (c) Clay line
- (d) Salinity of the seawater

( 4 )

9. Describe the different theories of origin of ocean basin. 4

Or

- What do you mean by tides? Describe the different types of tides. 4

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