

N-56087 Seat No. _____
M. Sc. (Part-II) Examination
April / May – 2003
Geology

Time : Hours]

[Total Marks :

Instructions : (i) Draw **neat** diagrams wherever necessary.
(ii) Your answer should carry the same number as per question paper.

1. Discuss the problem of groundwater occurrence with reference to porosity, permeability, well yield, well location and water quality in sedimentary rocks. 20

OR

1. Describe :- (1) Well location in volcanic rocks, (2) Groundwater quality in plutonic and metamorphic rocks, (3) Hydrological properties of non-indurated sediments, (4) Well yield in sedimentary rocks. 20
2. Write an account of seawater encroachment in underground aquifers and discuss the methods of artificial recharge to enhance the groundwater reserves. Comment on the water situation in Gujarat. 20

OR

2. Explain :- (1) Electrical methods of groundwater exploration, (2) Darcy's law, (3) Hydrological cycle, (4) Artesian conditions. 20
3. Define remote sensing and aerial photographs. Describe in details their use in geology. 20

OR

3. Discuss :- (1) Environmental impact of mining and construction, (2) Geomorphologic terminology. 20
4. Describe :- (1) Montmorillonite group of clay minerals, (2) Sardar Sarovar damsite, (3) Geological surveying. 20

OR

4. Explain : - (1) Illite group of clay minerals, (2) Clinometer and Brunton compass, (3) Sampling and labelling. 20
5. Write explanatory notes :- (1) Improvement of sites, (2) Types of reservoirs, (3) Excavations and backfilling. 20

OR

5. Write an account of the following :- (1) Tunnels along anticlines and synclines, (2) Landslides, (3) Foundations. 20