



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 5th Semester Examination, 2021

CC12-GEOLOGY

ENGINEERING GEOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

SECTION -A

1. Define (any *five*) 1×5 = 5
- (a) Porosity
 - (b) Elasticity
 - (c) Cable Anchorage
 - (d) Grouting
 - (e) Creep
 - (f) Check Dams
 - (g) Brazilian Disc Test
 - (h) Building materials.

SECTION-B

Attempt any *three* questions

5×3 = 15

2. Enumerate the geological factors taken into account in fixing the site of a dam.
3. Describe methods for safety of structures in earthquake-prone areas also mention about seismic map of India.
4. What are geological factors causing risk of slopes failure, giving an example of Darjeeling and Gangtok area?
5. Explain classification of landslides based on types of materials such as rocks and soils and their movement in the landslides.
6. How folds play important role in engineering project?

SECTION -C

Attempt any *two* questions

10×2 = 20

7. (a) Differentiate between grouting and rock bolting. 5
(b) Describe the geological investigations required to select a site for reservoir. 5
8. What are purposes of tunnels? Discuss the engineering consideration which favours the stability, economy and safety of tunnel.
9. Discuss about basic defects in rock mass. What causes defects and briefly describe about major defects and how they affect construction of dams and reservoir. 4+6
- 10 Write short notes on:
(a) Rock Structure Rating (RSR)
(b) Rock Mass Rating (RMR).

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