

Roll No.

Total Pages : 2

CMDQ/D-23 **5203**
ENGINEERING GEOLOGY

Paper–G–305

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Brief the following :

- (a) Poisson's ratio.
- (b) Swelling soils.
- (c) Wedge failure.

UNIT-I

- 2. Write a note on engineering properties of rocks.
- 3. Discuss Rock mass classification scheme proposed by Z. T. Bieniawski in 1979.

UNIT-II

4. Define and classify soils.

5. Comments on the following :

- (a) Shear strength of soils.
- (b) Cohesion and angle of internal friction.

UNIT-III

- 6. What are dams? Discuss role of engineering geology in planning and designing of dams.
- 7. Define and classify tunnels.

UNIT-IV

- 8. What are slope failures? Discuss different modes of slope failure and their assessment with the help of kinematic analysis.
- 9. Comments on any two of the following :
 - (a) Steps of watershed management.
 - (b) Mitigation of landslides.
 - (c) Flood control.