

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Summer 2022

Course: B. Tech.

Branch : Civil Engineering

Semester : VIth

Subject Code & Name: BTCVE605D Advanced Engineering Geology

Max Marks: 60

Date: 29/08/2022

Duration: 3.45 Hr.

Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

(Level/CO) Marks

Q. 1 Solve Any Two of the following.

- A) Write short notes on:- (CO1) 6
- a. Principle of Uniformitarianism
 - b. Law of cross cutting
 - c. AA lava flows
- B) Give a detailed account of the geological time scale. (CO1) 6
- C) Describe the physiographic divisions of India and their geological characters. (CO1) 6

Q.2 Solve Any Two of the following.

- A) Write a short note on:- (CO2) 6
- a. Undisturbed sampling
 - b. Aquitards
 - c. Boundary mapping
- B) Describe aquifer and their types with a neat labeled diagram. (CO2) 6
- C) What are the various drilling techniques used for rock exploration? (CO2) 6

Q. 3 Solve Any Two of the following.

- A) Write a short note on:- (CO4) 6
- a. Exfoliation weathering
 - b. Columnar joints
 - c. Laterite
- B) State and explain various types of basalts with their engineering properties. (CO2) 6
- C) Explain the construction criteria's of percolation tanks. (CO3) 6

Q.4 Solve Any Two of the following.

- A) Write a short note on:- (CO2) 6
- a. Koyana earthquake
 - b. Convergent plate boundary

c. Crushing strength of rocks

- B) What are the major factors that are responsible for landslide events? (CO4) 6
- C) Enumerate the difference between Wenner and Schlumberger resistivity methods. (CO2) 6

Q. 5 Solve Any Two of the following.

- A) Write a short note on:- (CO1) 6
- a. Richter scale
 - b. Residual soil profile
 - c. Black cotton soil properties
- B) Write a detailed note on textural classification soil. (CO1) 6
- C) Explain in detail about seismic zones in India with neat labeled diagram. (CO4) 6

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