

Parvatibai Chowgule College of Arts and Science
Autonomous

B.Sc. Semester End Examination, January/ February 2022

Semester: III

Subject: Geology

Course Title: Engineering Geology (Elective)

Duration: 2 Hours (10.00 am to 12.00 pm)

Upload : before 1.00 pm.

Max. Marks: 45

Instructions:

- All questions are compulsory. Internal choice is available.
- Figures to the right indicate maximum marks.
- Draw neat diagrams wherever necessary.
- Answers must be relevant to the questions.

- Students should write down the answers, scan/photograph the same and upload the handwritten answer sheets on the Google Classroom.
- Typed answer sheets shall not be assessed.
- The answer scripts produced by the students will need to have the following information on each answer page submitted:

Roll No:

Subject:

Semester:

Course Title:

Date Session: Morning/Evening

Page Number: (every page must be numbered as per the format: 1 OF 5 pages)

Student's Signature:

- The entire set of scanned documents must be converted into a **single PDF file** in the ascending order of page numbers before uploading the same on Google Classroom/CLAAP/email to the course teacher. If not, the course teacher will not be held responsible for any missing pages.
- The uploaded file **must be named with details of respective Roll Number.**

Q.1 Answer ANY THREE of the following: (09)

- a. Draw a neat labelled diagram depicting the soil profile.
- b. Discuss briefly the significance of an 'Environmental Impact Assessment' Plan.
- c. Enlist the various purposes for which tunnels are constructed.
- d. What is Soil Plasticity? Add a comment on its significance?

Q.2 Answer ANY TWO of the following: (12)

- e. Give a brief account of 'overbreaks' in tunnels.
- f. Discuss in detail the phases involved in site investigations.
- g. Elaborate on the various remedial measures that can be implemented for site improvement of faulted terrains.

Q.3 Answer ANY TWO of the following: (12)

- h. Discuss the various methods used for slope stabilization and prevention of failure.
- i. Write a comprehensive note on the types of Bridge designs and design selection criteria.
- j. Enlist the factors affecting the compressive strength of a rock and add a note on how it is measured?

Q.4 Answer ANY ONE (I or II) from the following: (12)

- I.k. Discuss the suitability of dam where beds strike parallel to the axis of the dam.
- I.l. Write a comprehensive note on the types of dam designs and design selection criteria.

OR

- II.m. Write a comprehensive note on the scope of Engineering Geology.
- II.n. Discuss the various geological parameters to be taken into consideration for 'building stones'?
