

**Parvatibai Chowgule College of Arts and Science**  
**Autonomous**

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

Semester: I

Subject: Geology

Course Title: Earth's Dynamics and tectonics (Core)

Duration: 2 Hours (2.00 pm to 4.00 pm)

Submission: before 5.00 pm.

Max. Marks: 45

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**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.
  - In case you face technical issues while uploading the answer book on Google classroom, **only then** email it to the course teacher at [ssg037@chowgules.ac.in](mailto:ssg037@chowgules.ac.in), 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.**
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**Q.I Answer ANY THREE of the following:**

**(09)**

1. Compare and contrast the outcrop patterns shown in the images below. 'O'- indicates older formation and 'Y'- Indicates younger formation.

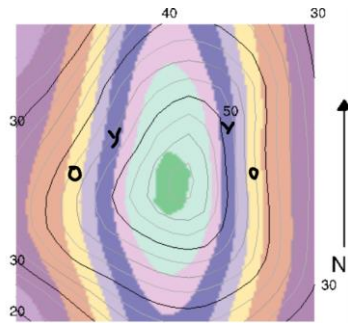


Image a.

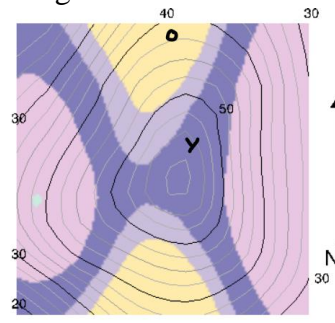


Image b.

2. How are columnar joints formed?
3. Enlist the basic components of a geological map?
4. Describe with a diagram the outcrop pattern of a plunging anticline on a hill.

**Q.II Answer ANY TWO of the following:**

**(12)**

1. Define "Isostasy". Present Airy's view of Isostasy and comment on its limitations.
2. Give an account of the various types of mass wasting processes.
3. Give three illustrations explaining the effect of geosphere on hydrosphere.

**Q.III Answer ANY TWO of the following:**

**(12)**

1. Elaborate on the 'Planetesimal Theory'.
2. Explain why there is variation in earth's gravity across different locations.
3. Write a note on Wilson Cycle with examples.

**Q.IV Answer ANY ONE from the following:**

**(12)**

- A.1. Explain the deformation in rocks occurring at divergent margins.
- A.2. Write a note on classification of Faults with neat diagrams.

**OR**

- B.1. Elaborate on different types of volcanism associated with different plate boundaries.
- B.2. What is an Unconformity. What are the different types of unconformities?

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