

Subject:
Geology (E)

B. STAT-II yr.
Mid Semester 2025-26
Date of Examination: 12/09/2025
Time: Two Hours
Answer all questions

Full Marks: 30

- Q. 1.**
- i) Egyptian mummy is a
- a) Body fossil
 - b) Trace fossil
 - c) Body fossil preserved under special condition
 - d) None of the above
- 1**
- ii) Fossils of Woolly mammoth are preserved in
- a) Amber
 - b) Granite
 - c) Ice
 - d) Gneiss
- 1**
- iii) Biostratinomic variables include:
- a) Colour
 - b) Encrustation
 - c) Stages of weathering
 - d) All of the above
- 1**
- iv) New oceanic crust forms at:
- a) Andes mountain
 - b) Oceanic trench
 - c) North pole
 - d) Mid-Oceanic-Ridge
- 1**
- v) Which of the followings is an extrusive igneous rock:
- a) Basalt
 - b) Sandstone
 - c) Granite
 - d) Marble
- 1**
- Q. 2.**
- a) What are the different types of plate boundaries? Explain each type with suitable diagrams and examples.
- 2.5+2.5**
- b) What are the textural differences between igneous and sedimentary rocks, and what do these differences imply about their genesis during Earth's geological evolution?

- Q. 3.** a) If a plane is dipping towards NE and dip of a plane is measured as 35° . Determine the strike of the plane.
- b) Within a single planar surface, two geologists report the orientation of two different lines:
- Geologist A states that a line in the plane has a **pitch (rake) of 70°** . **2+3**
 - Geologist B insists that another line in the same plane shows a **plunge of 70°** .
- At first sight, since both angles are 70° , one might think the two lines are parallel. But are they really parallel?
- Q. 4.** Describe the rheological structure of the Earth's interior with the help of a suitable diagram. Why is there no evidence of S-waves in the outer core? **3+2**
- Q. 5.** What is the Wilson Cycle, and how can fossils be used as evidence to support it? **3+2**
- Q. 6.** Define the recrystallization process of fossilization. How is it different from the replacement process of fossilization? **2.5+2.5**