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Time: Three Hours

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Maximum: 80 Marks

# SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2017

(CUCBCSS-UG)

Geology

## GLY 6B 17—STRUCTURAL GEOLOGY AND GEOTECTONICS

Draw neat sketches wherever necessary.

### Part A

### (Answer all ten questions in one word or one sentence each)

- 1. The line joining points of equal elevation in a map.
- 2. The direction along with an inclined plane is having maximum dip.
- 3. The type of fault with both dip slip and strike slip components.
- 4. The system of faults which are overlap each other.
- 5. Type of joints with same strike.
- 6. The unconformity in which sedimentary rocks overlain over crystalline rocks.
- 7. A major structural unit of the earth's crust that remained unaffected by later orogenies is called
- 8. The hypothetical supercontinent that is thought to have existed in the very distant Geologic past.
- 9. The term isostasy was proposed by
- 10. Discontinuity that separates crust from the mantle.

 $(10 \times 1 = 10 \text{ marks})$ 

### Part B

Short answer type questions. Explain any ten of the following.

- 11. Apparent dip.
- 12. Symmetrical fold.
- 13. Anticline.
- 14. Gap in fault.
- 15. Dilation.
- 16. Horst.
- 17. Strike slip.
- 18. Foot wall.
- 19. Lithosphere.
- 20. Hot spots.

Turn over

- 21. Oceanic trenches.
- 22. Benioff zone.

 $(10 \times 2 = 20 \text{ marks})$ 

### Part C

Paragraph type questions.

Describe any five of the following.

- 23. Stages of rock deformation.
- 24. Construction of contour maps.
- 25. Types of strain.
- 26. Joints in metamorphic rocks.
- 27. Drag fold and its significance in structural geology.
- 28. Petrochemical characters asthenosphere.
- 29. Seafloor spreading and age of the oceanic crust.
- 30. Polar wandering and Palaeomagnetism.

 $(5 \times 6 = 30 \text{ marks})$ 

### Part D

Essay type questions.
Answer any two questions.

- 31. Write an essay on Tectonic evolution of Indian subcontinent.
- 32. Explain the theory of plate tectonics. Add a note on the basic concepts.
- 33. Define fault. Describe the parts of a fault and classification of faults.
- 34. What are unconformities? Describe the types, significance and their recognition in the field and on the maps.

 $(2 \times 10 = 20 \text{ marks})$