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(Pages : 2)

Name...

Reg. No...................................

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2016

(CUCBCSS—UG)

Geology

GLY 5B 11—IGNEOUS PETROLOGY

Time : Three Hours

Maximum : 80 Marks

Draw neat sketches wherever necessary.

Part A

Answer **all** *ten questions in one word* **or** *one sentence each.*

1. Igneous rock entirely made up of labradorite.

2. The most abundant volatile gas in magmas.

3. The type of joints common in basalts.

4. The actual mineral composition of igneous rock.

5. A binary system typically exhibiting incongruent melting.

6. The rock that is essentially made up of quartz and tourmaline.

7. A discordant igneous body with exposure of less than 50 sq. km.

8. The product of reaction between leucite and free silica.

9. The essential undersaturated ferromagnesian mineral in peridotite.

10. The concordant igneous intrusion in folded strata.

(10 × 1 = 10 marks)

Part B

Short answer type questions. Answer any **ten** *questions.*

11. Primary magma.

12. Composite sill.

13. Batholith.

14. Spinifex texture.

15. Coronas.

16. Mural joint.

17. Texture of dolerite.

Turn over

18. Incongruent melting.

19. Petrographic province.

20. MORB.

21. Diorite.

22. Phase Rule.

(10 × 2 = 20 marks)

Part C

Paragraph type questions. Answer any **five** *questions.*

23. Chemical composition of magmas.

24. Distinction between laccoliths and lopoliths.

25. Intergrowth textures.

26. Devitrification.

27. Shand's classification of igneous rocks.

28. Ternary system.

29. Harkar variation diagram.

30. Origin of pegmatites.

(5 × 6 = 30 marks)

Part D

Essay type questions. Answer any **two** *questions.*

31. Describe the mechanisms responsible for the diversity in igneous rocks.

32. Give an account of CIPW classification bringing out its merits and demerits.

33. Describe the crystallization of Diopside- Anorthite system.

34. Describe the textural features of igneous rocks based on crystallinity and granularity.

(2 × 10 = 20 marks)