



QP CODE: 25004405

Reg No : .....

Name : .....

**B.Sc DEGREE (CBCS) SPECIAL REAPPEARANCE EXAMINATIONS, FEBRUARY  
2025**

**Fifth Semester**

**CORE COURSE - GL5CRT06 - IGNEOUS PETROLOGY**

Common for B.Sc Geology Model I & B.Sc Geology and Water Management Model III

2022 Admission Only

399DCA3D

Time: 3 Hours

Max. Marks : 60

**Part A**

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is rock cycle ?
2. Define parental magma.
3. What is Fractional Crystallizaion?
4. Differentiation process behind the formation of carbonatite ?
5. Process of one parent magma fractionate to produce different daughter magmas.
6. An intrusive form commonly associated with folded terrains.
7. When a rock contains both crystalline as well as glassy matter?
8. What is perthitic texture?
9. What do you mean by the term hypermelanocratic?
10. The essential minerals in basalt?
11. A dominant mineral in syenite.
12. An igneous rock with diamond ocurences.

(10×1=10)

**Part B**

*Answer any **six** questions.*

*Each question carries **5** marks.*





13. Briefly describe the Albite-Orthoclase subsolvus system with help of figure.
14. Why all the intensive variable are not free to change at eutectic point?
15. Volatile influx and melting of mantle. Relate.
16. Describe pyroclastic deposits.
17. Describe igneous textures based on crystallinity.
18. What is colour index? Describe the classification of igneous rocks based on colour index.
19. Classify igneous rocks as Alkaline, sub alkaline, calc alkaline and thoeiitic rocks.
20. Briefly describe the petrographic characteristics of Pegmatite.
21. Briefly describe the classification of Lamprophyre.

(6×5=30)

### Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Predict the crytallization result of the following bulk composition of peritectic system at 1 atm. a) fosterite90%, Silica 10%; b) fosterite 75%, Silica 25% and c) fosterite 30 %, Silica 70 %?
23. Describe in details how liquid Immcibility and assimilation/contamination result in the diversification of magma.
24. Give a detailed account on Classification of Igneous rocks based on texture, colour and silica saturation.
25. Discuss in detail the criteria for IUGS classification? Also give a detailed note on IUGS classification of common volcanic and plutonic rocks.

(2×10=20)

