

**M.Sc. II Semester Degree Examination, Sept./Oct. - 2024****APPLIED GEOLOGY****Igneous Petrology****(NEP)**

Time : 3 Hours

Maximum Marks : 70

Note : Answer **any five** of the following questions, each question carries **equal** marks.

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| 1. | (a) | Discuss the rock cycle with neat diagram. | 7 |
| | (b) | Explain the classification of igneous rocks. | 7 |
| 2. | (a) | Describe the importance of Diopside. | 7 |
| | (b) | Explain the importance of Fosterite with examples. | 7 |
| 3. | (a) | Add a note on applications of phase diagram. | 7 |
| | (b) | Discuss the H ₂ O phase diagram. | 7 |
| 4. | (a) | Explain the magmatic differentiation and crystallization of magma. | 7 |
| | (b) | Explain the Mid Oceanic Ridge (MOR) volcanism. | 7 |
| 5. | (a) | Describe the IUGS Classification of Igneous rocks. | 7 |
| | (b) | Give detailed account on QAPF diagram. | 7 |
| 6. | (a) | Explain the importance of Kimberlites. | 7 |
| | (b) | Write a note on Deccan basalts. | 7 |
| 7. | (a) | Discuss the concept of Lever rule and Tie line. | 7 |
| | (b) | Explain the rocks with a mass of more than 90% ultramafic rocks. | 7 |
| 8. | | Write short notes on : | |
| | (a) | Gabbroic rocks | 5 |
| | (b) | Carbonatites | 5 |
| | (c) | Characteristics of Magma | 4 |

