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Salahaddin University
College of Science
Department of Earth Sciences & Petroleum
2nd Class

Monthly Examination of
(Ign. & Met.) Petrology
Date: 26/3/2023
Time: 1 hour

Q1)

A/ Give the mineralogical compositions of the **five** of these rocks and give its equivalent **"10 mark"**

		Mineral composition	*equivalent*
1	*Dunite*		
2	*Trachyte*		
3	*Alkali-Syenite*		
4	*Diorite*		
5	*Granite*		
6	*Gabbro*		

B/ Give two examples for the following: ***(25 marks)***

Feldspathoid minerals	
Pyroxene group	
Inequigranular textures	
Intermediate rocks	
Intergrowth texture	

Q2) Complete the following Sentences: ***(22 marks)***

1- According to silica content (acidity) igneous rocks are classified into: **"6mark"**

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2- Phaneritic textures are divided to ***"6mark"***

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3- Viscosity of magma depends on (mention 4 factor) **"6 mark"**

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4- Define primary magma **"4 mark"**

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Q3) Write the chemical formulas of the following minerals: (answer "5") ***(10 marks)***

Olivine	Orthoclase
Leucite	Cristobalite
Anorthite	Calcite

Q4) Give reasons for the followings: ***(18 marks)***

1- The outer core does not allow for the transmission of S-waves.

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2- In equilibrium crystallization, the composition of the system is constrained by the bulk composition of the original melt.

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3- Often alkali feldspars generally grow quite large than oxide minerals and olivine.

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Q5) Write and draw about *aluminous phase lherzolite* (upper-mantle ultramafic) ***(15 marks)***