


Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Supplementary Examination, December- 2023

Course Name: Igneous Petrology
Programme Name: B. Sc, Geology (Hons)
Course Code: PEGS 2024

Semester: III
Time: 03 hrs
Max. Marks: 100

SECTION A

(5Qx 4M = 20 Marks)

Q 1	Describe the formation mechanism of reaction structure	04	CO1
Q 2	Describe the various physical properties of magma	04	CO1
Q 3	a. Sills linked by relatively short dike-like segments known as ----- b. Volcanic glass is otherwise known as ----- c. Anhedral grains give rise to -----texture d. Transformation of glass to crystalline matter is known as -----	04	CO1
Q 4	Differentiate between vesicular and amygdaloidal texture.	04	CO3
Q 5	a. Mutually touching phenocrysts in interstitial matrix give rise to ----- texture b. Sandpaper is an example of ----- abrasive. c. In CIPW, the input mineral composition must be in ----- form d. Plutons of area < 100 sq. km is known as -----	04	CO2

SECTION B

(4Qx10M = 40 Marks)

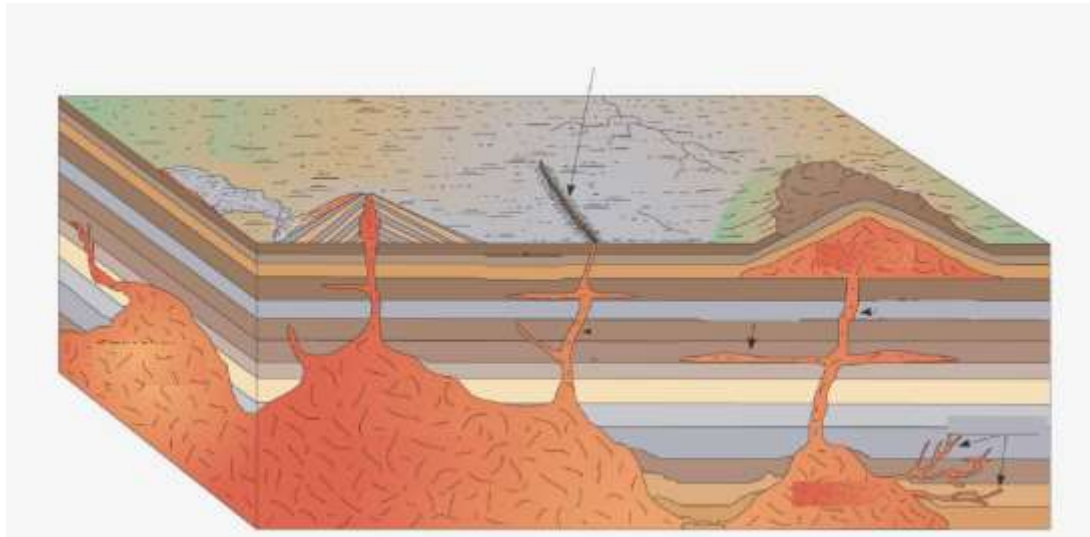
Q 6	Differentiate between vesicular and amygdaloidal texture.	10	CO3
Q 7	Can dykes be of sedimentary in origin, support/ oppose with suitable justifications	10	CO2
Q 8	Defend the statement “Reaction texture termed as Reaction structure”.	10	CO3
Q 9	Examine the theory behind the statement “Subduction zones are suitable location for magma generation”. <p style="text-align: center;">OR</p> Examine & validate the statement “Uni-component system should have a maximum of two degree of freedoms”.	10	CO4

SECTION C

(2Qx20M = 40 Marks)

Q 10	Examine the theory behind the statement “Subduction zones are suitable location for magma generation”. <p style="text-align: center;">OR</p> Design the classification norm for volcanic igneous rock using CIPW.	20	CO4
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Q 11



Identify and label (marked ones and unmarked ones) the various igneous forms and describe their characteristic features

5+15
10=20

CO3