

Name:
Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

Online End Semester Examination, January- 2021

Course Name: Mineral Science

Semester: I

Programme Name: B. Sc, Geology (Hons)

Time: 03 hrs

Course Code: PEGS 1002

Max. Marks: 100

SECTION A (30 Marks)

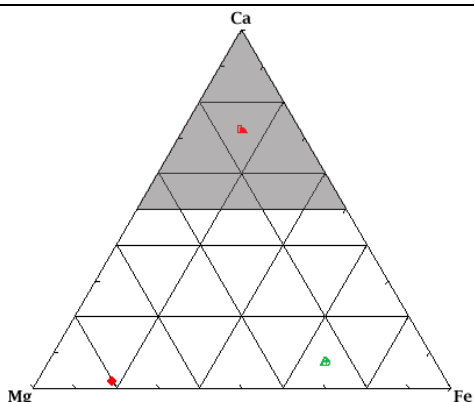
Q 1	a. Bertrand lens are used to observe ----- b. Minerals in which country is not self-sufficient, known as ----- c. Striations are characteristic of ----- d. Plants replaced by mineralization give rise to ----- e. Appearance of alternate dark & light patches in Plagioclase termed as -----	05	CO3
Q 2	Mark True/ False a. Syngenetic deposits crystallized simultaneous with host rock. b. Pyrite exhibits pleochroism c. Psilomelane exhibits white streak d. Different colors in minerals is due to inclusions e. All minerals are essentially crystals	05	CO1
Q 3	Mark True/ False a. Anthracite & Lignite are different grades of coal b. Hydrocarbon gases are the last products in oil cooking c. Placer deposits can be of residual origin d. Endogenetic deposits are formed due to surface processes e. Depth limitation of geo-botanical survey is 500 mtrs	05	CO1
Q 4	a. Rock crystal belongs to ----- mineral group b. ----- cleavage is found in quartz c. NEMP has a -----tier amendment system d. Representative of the formula for halite is ----- e. Augite mainly consists of _____	05	CO2
Q 5	a. Emery is used as ----- b. Sandpaper is an example of ----- abrasive. c. Ruby is the gemstone of ----- d. Quartz is used in watch is due to its ----- property e. Six fibrous silicate minerals come under -----group.	05	CO2
Q 6	Differentiate between Almandine & Andradite with respect to their mode of formation	05	CO2

SECTION B (10*5=50 Marks)

Q 7	Does coal take part in diamond formation? Yes/ Validate the statement with suitable justification/s.	10	CO4
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Q 8	Differentiate between Isotropic & anisotropic minerals	10	CO3
Q 9	List the common ore minerals of Copper. With suitable sketch, illustrate the formation of copper oxide and sulphide minerals.	10	CO4
Q 10	With neat sketch, explain play of light while i. Entering into polarizer ii. Analyzer is in iii. Sample is on stage	10	CO2
Q 11	With sketch, define solidus & liquidus curve in Phase Diagram OR Examine & validate the statement “Uni-component system should have a maximum of two degree of freedoms”.	10	CO3

SECTION C (20 Marks)

Q 12	 <p>Define solid solution series. Elaborate the solid solution series of Ortho-pyroxenes. Using the triangle, find out the tentative composition of three points marked.</p>	<p>5+5+ 10=20</p>	CO4
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