SH-I/Geology/102C-2(T)/19

B. Sc. Semester I (Honours) Examination, 2018-19

GEOLOGY

Course ID : 12012 **Course Code : SHGEL-102C-2(T)**

Course Title : Mineral Science

Time: 1 Hour 15 Minutes **Full Marks: 25**

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer *any five* questions from the following: 1×5=5

(a) Name the crystal system in which the isotropic minerals crystallise.

(b) State the law of constancy of interfacial angle.

(c) Name a mineral which shows anomalous interference colour.

(d) Give one example of mineral which occurs in fibrous form.

(e) Which mineral is used for construction of Nicol Prism?

(f) Give one example of felsic mineral which is understurated with respect to SiO_2.

(g) Name the crystal form with highest number of faces.

(h) Name the high temperature polymorph of alkali feldspar.

2. Answer *any two* questions from the following: 5×2=10

(a) State the principle of coordination and principle of sharing of coordination polyhedra according to Pauling's Rule.

(b) Write short notes on:

(i) Solid solution, and

(ii) Piezoelectricity

(c) Write the common formula of olivine group of minerals and mention different members of that group.

(d) Briefly describe the process of determination of Miller Indices of crystal faces.

3. Answer *any one* question from the following: 10×1=10

(a) Briefly describe different types of unit cell with suitable diagrams.

(b) Briefly describe with diagram the use of Becke line in determination of relative refractive indices of two adjacent minerals.

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