

BANKURA UNIVERSITY
B. Sc. Semester I (Hons) Examination 2017
GEOLOGY

Subject Code :12001

Course Code : SHGEL-101/C-T1

Course Title : Earth System Science

Full Marks : 25

Time : 1 Hour 15 Minutes

The figures in the right hand side margin indicate marks.

- 1. Answer any five questions of the following : 5 x 1 = 5**
- i) What are meteorites?
 - ii) What is epicentre?
 - iii) What is weathering?
 - iv) Define soil.
 - v) What are transform faults?
 - vi) Name the discontinuity surface between crust and mantle.
 - vii) What is Curie point?
 - viii) What is the source of earth's magnetic field?
- 2. Answer any two questions of the following : 2 x 5 = 10**
- i) Briefly narrate the major evidences in favour of continental drift theory.
 - ii) State the different types of plate boundaries.
 - iii) Briefly state the differences between terrestrial and jovian planets.
 - iv) Match the columns :

a) James Hutton	Mass-extinction
b) K-Ar method	Origin of Earth
c) Nebular Hypothesis	Age of Reptiles
d) P-T Boundary	Law of Uniformitarians
e) Mesozoic	Radiometric dating
- 3. Answer any one question of the following : 1 x 10 = 10**
- a) Briefly describe, with a neat sketches the internal structure of the earth.
 - b) What is isostasy? State the two major hypotheses of isostasy with sketches.

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Subject Code :12002 Course Code : SHGEL-102/C-T2
Course Title : Mineral Science

Full Marks : 25

Time : 1 Hour 15 Minutes

The figures in the right hand side margin indicate marks.

- 1. Answer any five questions of the following : 5 x 1 = 5**
- a) What is the basic difference between crystalline and amorphous matters?
 - b) Name any two ca-bearing mineral members of Mohs' hardness scale.
 - c) Define coordination number of a cation.
 - d) Name one high pressure polymorph of SiO₂.
 - e) Name a mineral which characteristically shows bladed habit.
 - f) What are the full form of CCP and HCP?
 - g) Name the important factors controlling the interference colour of a mineral.
 - h) Name the phenomenon by which an ordinary light be polarised.
- 2. Answer any two questions of the following : 2 x 5 = 10**
- a) Briefly describe the axial properties of seven crystal systems. 5
 - b) What are uniaxial and biaxial minerals? Name the crystal systems of uniaxial and biaxial minerals. 2½+2½=5
 - c) Write the general formula of feldspars group of minerals and name the mineral members of plagioclase series.
 - d) Define pseudomorphism and polymorphism 2½+2½=5
- 3. Answer any one question of the following : 1 x 10 = 10**
- a) Classify silicate minerals on the basis of Si-O linkage mentioning their Si:O ratio with one example of each subclass. 10
 - b) Briefly describe the principle of construction of Nicol prism with suitable sketches. 10

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Subject Code :12011

Course Code : SHGEL-101/C-P1

Course Title : Earth System Science Lab

Full Marks : 15

Time : 2 Hours

The figures in the right hand side margin indicate marks.

1. Name the geomorphic features at the points A, B, C and D of the given topographic map. Draw a section along the line 'XY' 4+6=10

2. Laboratory note book 5

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Subject Code :12012

Course Code : SHGEL-102/C-P2

Course Title : Mineral Science Lab

Full Marks : 15

Time : 2 Hours

The figures in the right hand side margin indicate marks.

1. Describe the physical properties of the given mineral in hand specimen and identify it. 3+1=4
2. Describe the optical properties of the given mineral in thin section and identify it. 3+1=4
3. Study the symmetry elements of the given crystal model and mention its crystal system. 2
4. Laboratory note book 5