Paper Code: GenEd-GEOL-01
The Earth, Atmosphere and Life: Early Days
Full Marks 50: 4 Credit
Marks: 35

1. Elementary information on the Universe and the Solar System, members of the Solar System. Origin of the Solar System, Nebular Hypothesis, formation of planets.Origin of the Moon.Major types of Meteorites.
2. Differentiation of Earth's core, mantle and crust.
3. Earth's materials, minerals and rocks. Broad groups of minerals and rocks.
4. Earth's oldest rocks. Nature of early crust.
5. Early atmosphere and Rise of atmospheric oxygen.
6. Origin of life: Brief idea on the origin of life. Biomarkers, Early life: fossil record of early protoctists, evolution of metazoans, Ediacaran fauna; Cambrian explosion.

Practical/Projects/Internal Assignment:
Marks: 15

Earth's materials: study of minerals and rocks in Laboratory or in field, or Projects related to Earth's materials

Suggested books on Introduction to Earth Systems Science
Text

1. Press, F., Siever, R., Grotzinger, J. and Jordan, T.H., 2004, Understanding Earth, 4th Edn., W.H. Freeman, 567 p.
2. Tarbuck, E.J. and Lutgens, F.K., 2006, Earth Science, 11th Edn., Pearson Prentice Hall, New Jersey, 726 p.
3. Roy, A. B., 2010, Fundamentals of Geology, Narosa Publishing House, p. 316.
4. Bose, M.K., 1997, Igneous Petrology, World Press, Kolkata, 568 p.
5. Park, R. J., 2004, Foundations of Structural Geology, Routledge, 3rd Edition, p. 202.
6. Skinner, B.J., Porter, S.C. and Park, J., 2003, The Dynamic Earth: An Introduction to Physical Geology [With CDROM], John Wiley & Sons, 631 p.
7. Mukherjee, P. K., Text book of Geology, The world press Pvt. Limited.