

5th SEMESTER
(SKILL ENHANCEMENT COURSE)
(GEOLOGY)

GL517S2: GEOLOGY FOR INFRASTRUCTURE DEVELOPMENT

CREDITS: THEORY: 2, PRACTICAL: 2

THEORY (2 CREDITS)

Unit-1

Geological materials for construction of roads, buildings, tunnels, dams and bridges. Engineering properties of rocks (granite, dolerite, basalt, sandstone, limestone, shale quartzite, marble, slate, genesis and schist).

Unit-2

Determination of the engineering properties of rocks. Geological and geotechnical considerations in the selection of sites for the construction of roads, buildings, tunnels, dams and bridges.

PRACTICAL (2 CREDITS)

Unit-1

Field reconnaissance and mapping for the construction of roads, buildings and tunnels.

Unit-1

Field reconnaissance and mapping for the construction of dams and bridges.

Suggested

READINGS:

- Billings, M.P, (1984), Structural Geology, Prentice Hall of India
- Robert R. Compton, (1962), John Wiley & sons, Manual of field geology, INC, Newyork, London
- Thornbury, W.S.(1969), Principles of Geomorphology, Wiley Eastern, New Delhi.
- Dayal, P. (1990). A Text Book of Geomorphology, Shukla Book Depot, Patna.
- Sharma, H.S. (1990), Indian Geomorphology, concept Publ.Co., New Delhi
- Duff.P.McI.D. (1992), Holmes, Principles of Physical Geology, Edited by 4th Ed. Chapman and Hall, London
- Phillips Edward, F.C. (1994). The use of Stereographic projection in Structural Geology, Arnold Publishers.
- Ramsay, J.G., Huber, M.I., (1987), Vol.2, The Techniques of modern Geology, Folds and Fractures.
- Engineering Geology for Civil Engineering, P.C. Varghese, PHI Learning & private Limited. Geology basics of Engineering by Aurele Parriaux, CRC press
- Krynine & Judd, principles of Engineering Geology & Geotechnics, CBS Publishers & Distribution.
- F.G. Bell Fundamental of Engineering Geology Butterworths, Publications, New Delhi, 1992.