

21GGE505T - APPLIED GEOPHYSICS										
Teaching Scheme					Examination Scheme					
L	T	P	C	Hours/Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
3	0	0	3	3	25	50	25	-	-	100

Unit I

Hours: 12

Geology and Geophysics: Interrelationship between geology and geophysics, Role of geological and geophysical data in explaining geodynamical features of the earth. General and Exploration geophysics: Different types of geophysical methods - gravity, magnetic, electrical and seismic; their principles and applications; Concepts and Usage of corrections in geophysical data.

Unit II

Hours: 08

Geophysical field operations: Different types of surveys, grid and route surveys, profiling and sounding techniques Scales of survey, Presentation of geophysical data.

Unit III

Hours: 08

Application of Geophysical methods: Regional geophysics, oil and gas geophysics, ore geophysics, groundwater geophysics, engineering geophysics.

Unit IV

Hours: 12

Geophysical anomalies: Correction to measured quantities, geophysical, anomaly, regional and residual (local) anomalies, factors, controlling anomaly, and depth of exploration. Integrated geophysical methods: Ambiguities in geophysical interpretation, planning and execution of geophysical surveys.

MAX <40 Hrs>

TEXT / REFERENCE BOOKS

1. Outlines of Geophysical Prospecting - A manual for geologists by Ramachandra Rao, M.B., Prasaranga, University of Mysore, Mysore, 1975.
2. An introduction to Geophysical Prospectin by Dobrin, M.B. (1984), McGraw-Hill, New Delhi.
3. Applied geophysics (Vol. 1) by Telford, W. M., Geldart, L. P., & Sheriff, R. E. (1990), Cambridge university press.
4. Fundamentals of geophysics by Lowrie, W. (2007), Cambridge University Press.