20PEB207P					Petroleum Exploration Practical					
Teaching Scheme					Examination Scheme					
L	T	P	C	Hrs/Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
0	0	2	1	2	--	--	--	50	50	100

COURSE OBJECTIVES

- To provide the fundamental of petroleum exploration, different methods of geophysical surveys and instruments used for it.
- To provide the understanding of geophysical data interpretation and analysis
- To provide how to examine the acquired data to understand the position and extent of subsurface prospects in terms of depth and aerial

List of Experiments

1. Basics of Contouring (Hand Drawn and Computerised)
2. Gravity data Acquisition
3. Gravity Data Processing and Interpretation
4. Magnetic Data Acquisition
5. Magnetic Processing and Interpretation
6. Seismic Data Acquisition (Shallow Seismic-Hammer source)
7. Seismic data processing (Shallow seismic-Hammer source)
8. Seismic data interpretation (Shallow seismic-Hammer source)
9. Unconformity and Seismic facies identification
10. Horizon and Fault Mapping of processed 2D line
11. Identifying Play, Lead and Drillable prospects from seismic data

COURSE OUTCOMES

On completion of the course, student will be able to

CO1- Evaluate prospects and drillable prospects.

CO2- Understand the petroleum system along with the source analysis

CO3- Examine the Process of gravity, magnetic, seismic and resistivity data acquisition, processing and interpretation will help students to handle instruments like gravimeter, magnetometer, seismometer, seismometer and resistivity meter.

CO4- Integrate gravity and magnetic data to understand the density and magnetic susceptibility of the subsurface.

CO5- Integrate seismic, well log and other geophysical data for volume estimation.

CO6- Examine the structural and stratigraphic data to understand the position and extent of subsurface prospects in terms of depth and aerial extent.

TEXT/REFERENCE BOOKS

1. Mamdough, R. Gadallah, Reservoir Seismology, Pennwell Books, Pennwell Publishing Company, Tusa, Oklahoma.
2. Telford, W M, Geldart, L.P., Sheriff, R.E. and Keys, D.E., Applied Geophysics, Oxford and IBH Publishing Co Pvt Ltd.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: Evaluation Based on the class performance and Laboratory book **50Marks**

PART B: Viva Examination based conducted experiments **50 Marks**