


Name:			
Enrolment No:			
<b>UNIVERSITY OF PETROLEUM AND ENERGY STUDIES</b> <b>End Semester Examination, December 2022</b>			
<b>Course: Introduction to Geophysics</b> <b>Program: BSc. (Hons.) Geology</b> <b>Course Code: PEGS3031D</b>		<b>Semester: V</b> <b>Time : 03 hrs.</b> <b>Max. Marks: 100</b>	
<b>Instructions: All Questions are compulsory. Internal choices are given in Question No. 9 &amp; 10.</b>			
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
S. No.		Marks	CO
Q 1	Construct gravity anomaly profiles generated due to presence of (a) subsurface structure and (b) stratigraphic anomaly.	4	CO1
Q 2	Explain the designing of gridding of Geophysical surveys.	4	CO1
Q 3	List various types of geophysical surveys.	4	CO2
Q 4	Explain geophysical field operations.	4	CO1
Q 5	List the best application of Resistivity methods.	4	CO2
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q 6	Critically examine the application of geophysical methods for Regional and local Geophysics with examples.	10	CO2
Q 7	Explain the significance of various geophysical methods for mineral/ore exploration.	10	CO4
Q 8	Discuss the principles and applications Concepts of Seismic methods with diagram.	10	CO2
Q 9	Illustrate the working principle of VLF-EM method <b>OR</b> Differentiate among principles involved in VES, Resistivity Profiling and IP methods with a suitable diagram.	10	CO3
<b>SECTION-C</b> <b>(2Qx20M=40 Marks)</b>			
Q 10	Review the concepts and significance of integration of Geophysical data. <b>OR</b> Develop a model to illustrate how factors control gravity anomaly.	20	CO3
Q 11	Review the application of various Geophysical methods for Hydrogeological problems providing a suitable case study with reference.	20	CO4