

<b>Name:</b>	 <b>UPES</b>
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**Online End Semester Examination, December 2020**

<b>Programme Name:</b> B.Tech (GIE/GSE)	<b>Semester :</b> VII
<b>Course Name :</b> Geophysical data acquisition processing & interpretation	<b>Time :</b> 03:00 hrs
<b>Course Code :</b> PEGS 4001	<b>Max. Marks:</b> 100
<b>Nos. of page(s) :</b> 1	

**SECTION-A (6 x 5=30)**  
**Attempt all questions**

Sl. No.	Answer in one or two lines	Marks	CO
Q1	What is SP Logging and what is its importance in formation evaluation?	5	<b>CO1</b>
Q2	What is the definition of signal and noise in digital data acquisition system?	5	<b>CO6</b>
Q3	What is 4D seismic survey?	5	<b>CO5</b>
Q4	In reflection seismic survey how you change velocity profile to depth profile?	5	<b>CO5</b>
Q5	In what type of bore hole environment induction logging is appropriate?	5	<b>CO3</b>
Q6	In magnetic geophysical survey why we use two magnetometers simultaneously?	5	<b>CO4</b>

**SECTION-B (5 x 10=50)**  
**Attempt all questions.**

	Answer in few lines		
Q7	What are Low Pass, High Pass and Band Reject filters in digital signal processing?	10	<b>CO6</b>
Q8	What is the importance of viscosity to determine fluid property in Nuclear Magnetic Resonance Logging?	10	<b>CO1</b>
Q9	What are the advantages and disadvantages of Magnetotelluric geophysical survey?	10	<b>CO3</b>
Q10	What is the difference between regional and residual gravity anomaly in gravity geophysical survey?	10	<b>CO2</b>
Q11	Describe the working principal of dip meter logging tool.	10	<b>CO1</b>

**SECTION-C (20 x 1=20)**  
**Attempt all**

	Answer comprehensively		
Q12	a. What is normal move out and what is its importance in seismic geophysical survey? b. What is the importance of cross over distance in seismic geophysical survey?	10 + 10 = 20	<b>CO6</b>