


Name: Enrolment No:			
<b>UNIVERSITY OF PETROLEUM AND ENERGY STUDIES</b> <b>End Semester Examination, December 2022</b>			
<b>Course: River Science</b> <b>Program: BSc Geology</b> <b>Course Code: PEGS3036D</b>		<b>Semester: VI</b> <b>Time : 03 hrs.</b> <b>Max. Marks: 100</b>	
<b>Instructions:</b> 1) One questions in sections b and c is having an internal choice 2) Draw figures wherever necessary			
<b>SECTION A (5Qx4M=20Marks)</b>			
S. No.		Marks	CO
Q 1	Illustrate a flow chart depicting the Normalized difference of the Vegetation Index (NDVI)	4	CO2
Q 2	Describe the river ecosystem and provide s suitable diagram	4	CO1
Q 3	Define implications of satellite geodesy for river network analysis and geohazard monitoring	4	CO1
Q 4	Describe techniques of geohazard management using river science	4	CO2
Q 5	Differentiate between Mountain front sinuosity (smf) and Valley floor height and width (VfW) ratio.	4	CO3
<b>SECTION B (4Qx10M= 40 Marks)</b>			
Q 6	Describe the method for estimation of fault rupture length using the drainage network analysis. Provide a suitable diagram	10	CO3
Q 7	Describe the empirical relation between drainage offset and upstream distance.	10	CO2
Q 8	Explain different stages of the river channel with a spatial emphasis on drainage basin hypsometric.	10	CO4
Q 9	Describe the physical properties of water in detail. <b>OR</b> Define geometric classifications of different categories of fluvial terraces.	10	CO2
<b>SECTION-C(2Qx20M=40 Marks)</b>			
Q 10	Describe fluvial geomorphology and define different aggregational and degradational geomorphic features associated with drainage pattern. <b>OR</b> Describe the different pattern of a drainage system.	20	CO3
Q 11	Explain river science and discuss the different components of river science in detail.	20	CO4