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

Course: Advances in GIE **Semester: VIII**
Program: B. Tech. GIE **Time 03 hrs.**
Course Code: GIEG 403 **Max. Marks: 100**

SECTION A

S. No.	Instruction: Fill up the blank spaces / Tick the correct answer	Marks	CO
Q 1	The outputs (8 nos.) of RAMMS model are ------------, ---------------, -------------, ------------, ---------------, --------------, ---------------. -------------	5	CO3
Q2	The computed value of third moment of mean of the given data is – 40, 60, 70, 80 a. -3005.5; b. – 4125.6; c. -3234.4 d. – 2501.5	5	CO4
Q3	The inputs parameters (11 nos.) require for GIS based BIOME – BGC model are -------------, -----------, ------------, --------------, ---------------, ---------------, -------------, -------------, ---------------, ------------------, --------------------.	5	CO3
Q4	The value of first order channel initiation index for a grid, computed using grid watershed area (30 m square) and terrain slope (20 degree) is a. 2.96 b. 3.97 c. 4.50 d. 5.60	5	CO2
Q5	The calculated value of "b" in a directional variogram with the given data – Gamma (h) = 0.6; x1 = 10; x2= 5; y1 = 10; y2 = 6 and Gamma1 = 0.5; is a. 1.21 b. 1.50 c. 2.24 d. 2.15	5	CO1
Q6	Factor of safety is depend on seven parameters and these are ----------------------, -------------------, ------------------------, --------------------------, -------------------- --------------------, ------------------------	5	CO3
	SECTION B		
	Instruction: Write short / brief notes on -		
Q 7	Five advantages of Kriging interpolation method over IWD or local interpolation method.	10	CO1
Q 8	Use of geostatistics in petroleum geoscience.	10	CO1
Q 9	Characteristics of terrain profile and planform curvatures and applications of these parameters in natural resources inventory.	5 + 5	CO2
Q 10	Approach and analysis steps of one earthquake induced landslide hazard zonation geo-spatial modeling.	10	CO3
Q 11	Applications of GNSS in disaster management (Geological; Tsunami; and hydro-meteorological disasters) OR Principle of GNSS Meteorology and the analysis steps of use of GNSS in atmospheric water vapour content	10	CO2

	SECTION-C		
Q12	Explain the concept of Evidential belief function approach of geo-spatial modeling and give an example of application of this approach in hydrocarbon exploration with analysis steps. OR Write in details the geo-spatial modeling approach of Weight of Evidence (WoF) and give an example of application of WoF spatial modeling approach in landslide hazard zonation with analysis steps.	**5 +15**	**CO2**