

Name:	
Enrollment No:	

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

Programme: B. TECH GIE Course: Introduction to GIS & GNSS Course Code: PEGI 2003	Semester: III Time: 3 hrs. Max. Marks: 100
---	---

SECTION A

All Questions are Compulsory.

S. No.	Question	Marks	CO
Q 1.	a) Which overlay tool should an ArcGIS user employ to create a new feature class containing all the features from two polygon feature classes? i. Union ii. Merge iii. Intersect iv. Append	2	CO2
	b) Which geodatabase type should be used to support editors simultaneously modifying the same data? Choose the correct answer and tell why others are not the correct answers. i. File geodatabase ii. Personal geodatabase iii. Disconnected replica geodatabase iv. Versioned geodatabase	3	
Q 2.	a) What is the UTM Zone for Dehradun (coordinates 30.3157° N, 78.3586° E). Show the calculations.	2	CO2
	b) What is a standard parallel and its importance? Name the type of projection with two standard parallels.	2+1	
Q 3.	a) Differentiate between ephemeral and almanac data.	2	CO4
	b) Differentiate between a large-scale map and a small-scale map with examples.	3	
Q 4.	a) Identify the advantages and disadvantages of converting vector data into raster using automated software.	2	CO1
	b) List the two different classes of errors that might be present in maps with brief explanation of each.	3	
Q 5.	a) Briefly explain the term Proximity Analysis.	2	CO3
	b) Differentiate between AND & OR operator using truth tables.	3	
Q 6.	a) What is the thumb rule for choosing Azimuthal, Cylindrical and Conical projections?	2	CO2
	b) Differentiate between Tangent and Secant projections.	3	

SECTION B

Q 7.	Describe the four types of data recognized in a GIS with examples.	10	CO1
------	--	----	-----

Q 8.	a) Summarize the importance of Georeferencing in GIS. List the steps involved in Image to Image Georeferencing.	5	CO2
	b) Define projection and explain the different types of distortions that can occur while projecting any surface?	5	
Q 9.	List and explain the major analytical tools for vector analysis in GIS. Draw relevant diagrams for each.	10	CO3
Q 10.	Describe the different segments in GPS operation. Draw relevant diagram showing up linking and downlinking of data.	10	CO4
Q 11.	Explain the process of Trilateration by which GPS receiver determines its position. Draw diagrams.	10	CO4
SECTION C ATTEMPT any ONE.			
Q12.	Discuss the two types of coordinate systems enumerating how coordinates are measured in each system. Draw suitable diagrams. OR Give the steps involved in a geodatabase development process, detailing the steps involved at each of the conceptual, logical, and physical design phases.	20	CO3