

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, May 2021

Course: Spatial Data Modeling and Analysis
Program: B. Tech CSE OGI
Course Code: CSOG 2008

Semester: IV
Time : 03 hrs.
Max. Marks: 100

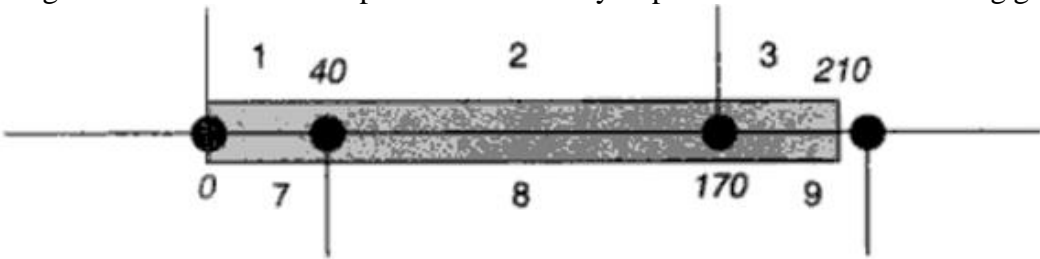
SECTION A

1. Each Question will carry 5 Marks
2. Instruction: Write short / brief notes

S. No.	Question	CO
Q 1	State Tobler's first and second law of Geography and their application in Spatial Analysis.	CO2
Q2	Spatial Data Analysis is prone to various errors due to wrong data and perception. Illustrate any 5 types of spatial fallacies encountered during spatial analysis?	CO2
Q3	Elucidate with proper example the concept of spatial diffusion?	CO3
Q4	Restate the phenomena of Kriging? What is the major difference between Kriging and IDW?	CO3
Q5	"Spatial analysis needs to undergo a series of rules and criteria's". List five spatial data criteria used in spatial analysis	CO2
Q6	State different kinds of Topological errors addressed in spatial analysis.	CO2

SECTION B

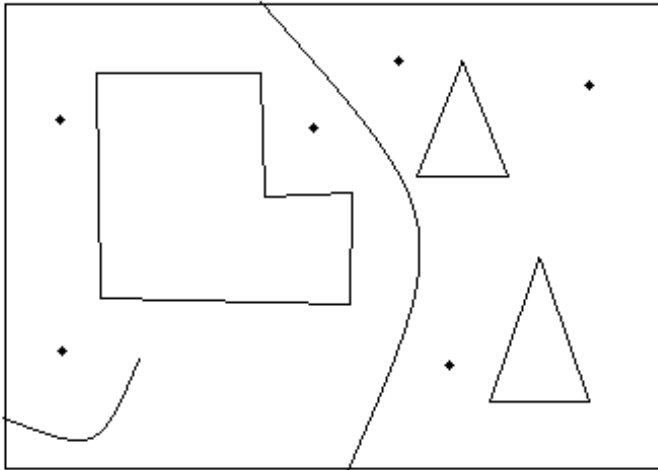
1. Each question will carry 10 marks
2. Instruction: Write short / brief notes

Q 1	Elucidate various different analysis functions present in QGIS for Spatial Data Manipulation	CO4
Q 2	Design a Route Model and explain network analysis performed for the following given data set. <div style="text-align: center; margin: 10px 0;">  </div>	CO1
Q 3	Illustrate the role and architecture of a spatial database in any GIS software	CO4
Q 4	Formulate the concept of Spatial Regression and its application in understanding the spread of Corona Virus in India.	CO3
Q 5	Explain with proper example different types of GIS Models used in any spatial analysis.	CO2

Section C

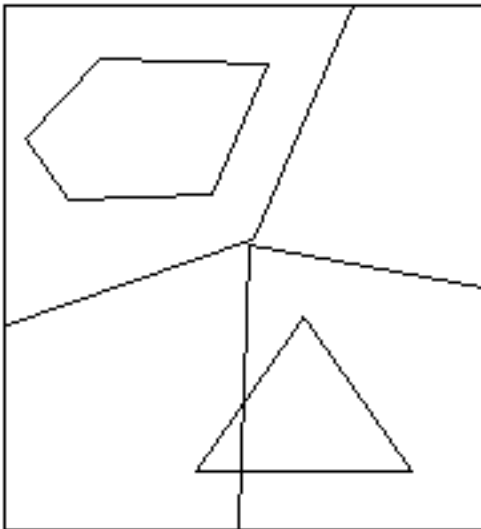
1. Each Question carries 20 (10+10) Marks.
2. Instruction: Write long answer.

Q1



- a. Design a topological data model for the above mentioned diagram:
- b. Elucidate the concept of Spatial Interpolation with proper example

Or



- a. Design a Coverage data model for the above mentioned diagram:
- b. Elucidate the concept of Spatial Autocorrelation with proper example

CO1