Academic lesson plan for summer semester - 2022

Name of the teaching faculty: Soumya Ranjan Maharana
Discipline: Civil Engg.
Semester: 6th
Subject: LS-II
No. of periods per week: 5
Total periods: 75
End semester exam: 80
Class test: 20
Total marks: 100

Week	Period	Unit/chapter	Topic to be covered
1st	1st	1.1	Principles, stadia constants determination
	2nd		
	3rd		
	4th	1.2	Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined, numerical problems
	5th		
2nd	1st		
	2nd	1.3	Elevations and distances of staff stations – numerical problems
	3rd		
	4th		
	5th	2.1	compound, reverse and transition curve, Purpose & use of different types of curves in field
3rd	1st	2.2	Elements of circular curves, numerical problems
	2nd		
	3rd	2.3	Preparation of curve table for setting out
	4th	2.4	Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord, (ii) successive bisection of arc, (iii) offsets from tangents, (iv) offsets from chord produced, (v) Rankine's method of tangent angles (No derivation)
	5th		
4th	1st	2.5	Obstacles in curve ranging – point of intersection inaccessible
	2nd		
	3rd	3.1	Fractional or Ratio Scale, Linear Scale, Graphical Scale
	4th	3.2	What is Map, Map Scale and Map Projections
	5th		
5th	1st	3.3	How Maps Convey Location and Extent
	2nd	3.4	How Maps Convey characteristics of features
	3rd	3.5	How Maps Convey Spatial Relationship
	4th	3.6	Classification of Maps
	5th		
6th	1st	4.1	Open Series map
	2nd		
	3rd		
	4th	4.2	Defense Series Map
	5th		
7th	1st		
	2nd	4.3	Map Nomenclature
	3rd		
	4th		
	5th		

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8th	1st	5.1	Aerial Photography
	2nd		
	3rd	5.2	Photogrammetry
	4th		
	5th	5.3	Photogrammetry Process
9th	1st		
	2nd	5.4	DTM/DEM Generation
	3rd		
	4th	5.5	Ortho Image Generation
	5th		
10th	1st	6.1	Principles, features and use of (i) Micro-optic theodolite, digital theodolite
	2nd		
	3rd		
	4th		
	5th	6.2	Working principles of a Total Station
11th	1st		
	2nd		
	3rd		
	4th		
	5th		
12th	1st	7.1	GPS: - Global Positioning
	2nd		
	3rd		
	4th	7.2	DGPS: - Differential Global Positioning System
	5th		
13th	1st		
	2nd	7.3	ETS: - Electronic Total Station
	3rd		
	4th		
	5th		
14th	1st	8.1	Components of GIS, Integration of Spatial and Attribute Information
	2nd	8.2	Three Views of Information System 8.2.1 Database or Table View, Map View and Model View
	3rd	8.3	Spatial Data Model
	4th	8.4	Attribute Data Management and Metadata Concept
	5th	8.5	Prepare data and adding to Arc Map.
15th	1st	8.6,8.7	Organizing data as layers, Editing the layers
	2nd	8.8,8.9	Switching to Layout View, Change page orientation
	3rd	8.10	Removing Borders
	4th	8.11	Adding and editing map information
	5th	8.12	Finalize the map