

Q. 4 (a) What is the role of databases in GIS?

(b) Which are the common database structures? *relational database*

(c) What do you understand by Normal Forms in a relational database?

(2, 3, 3)

Q. 5 Describe the following

(a) Map scales

(b) Digitization errors

(c) DGPS

(d) Prime meridian

verbal rep. just graphical

1

1

1

28,000

10,000

(2x4)

Introduction to Geographic Information System

CEL455 – Major Test

25 November, 2014

- Q. 1 a) What is the difference between a grid and TIN DEM.
mostly
- b) Explain various steps used for delineating a watershed using the D-8 approach and the following grid. Show the drainage for a threshold value of 3.

58	52	69	71	58	49
54	67	56	49	32	50
49	53	44	37	38	48
44	58	55	22	31	24
56	61	47	21	16	19
74	53	34	12	11	12

- Q. 2 a) It is said that the Raster data model of GIS is more efficient for overlay analysis; explain what is the reason for this? (2, 6)
- b) What do you understand by projection systems in the GIS? While picking up information from the existing maps why it is necessary to know the projection systems of the source map? Explain reason by making an appropriate sketch.

*clip
map
source
vector*

- Q. 3 a) What is the role of interpolation in GIS? (3, 5)
- b) Given the following data on five surrounding points, interpolate the value for point 'O' using the Inverse Distance Weighted method taking the power to be 3.

Point	Distance from Pt. O	Value
1	18.0	20.82
2	20.9	10.910
3	32.3	10.38
4	36.1	14.6
5	47.2	10.56
O	0.0	?

*As 11 = 11
Pr a =*

(3,5)