2019

MSc

2nd Semester Examination

RS & GIS

PAPER – RSG 203

Full Marks :40

Time : 2 hrs

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their Own words as far as practicable.

Illustrate the answers wherever necessary.

GIS Data Analysis

Group-A

Answer any two questions: 2x2

1) What is "data accuracy" and "data precision"?

2) What is attribute data ?

3) What is spatial data ?

4) What is RDBMS?

Group- B

Answer any two questions : 2x4

5) Explain the concept of "Spaghetti Model".

6) Discuss briefly about Interpolation in GIS.

7) Write a short note on neighbourhood analysis.

(8) Explain proximity and network analysis.

Group- C

Answer any ONE question : 1x8

9 (i) What is "data compression"?

(ii) Why is "data compression" important for storing raster geospatial data ? 3+5=8

10) i) Explain with numerical example about the linear and weighted overlay (6+2)
Analysis.

ii) What is network analysis.

RS & GIS

Group-A

Answer any two: 2x2

1) What are the application of geodesy ?

2) Differentiate between geoid and ellipsoid.

3) Define geocentric astronomical and geodetic latitude ?

(4) Differentiate between ellipsoid and geoid ?

Group-B

Answer any two : 2x4

(5) Write short notes on Everest spheroid and WGS-84, mentioning their geometric constantans & parameters . 4

(6) What is spherical triangles ? Prove that the sum of three sides spherical Triangle in greater than 180^0 and less than 540^0. 2+2

(7) Prove that three angles of a spherical triangle is greater than 180^0 and less than 540^0.

(8) Write down the characteristic of Radious of curvature of a meridian on an Ellipsoid ?

Group-C

Answer any one

9) Write down the mathematical relation between the components of ellipsoid (ϕ,λ, h) & Carterian (X, Y, Z) co-ordinate system used for co-ordinate transformation. What are WGS-84 and UTM ? Why these are used globally an standard for georeferencing ? 4+2+2

(10) Differentiate between geocentric geodetic and astronomical latitude. What is the Meaning of nautical mile ? Briefly discuss the process and use of affine transformation In GIS. 4+4