

Practical-1

→ calculate area

Right click on Layer → Open Attributes tables → Field calculator → Geometry → \$area

→ Intersect

Vector → Georeferencing Tool → Intersection

→ Add North Pointer, Legend, Scale

Project → New Print Layout → Add items → Add map, Legend, Scale Bar, Add Picture

* To save select Layout → Export as Image → Save → Set resolution to 1200 dpi

Practical-2

→ Raster Layer & Styling

Add Raster Layer → Right Click on layer → properties → Rendertype: Singleband Pseudocolor - 0 to 240 → OK

Raster → Raster Calculator → subtract 2 expressions → Select File locⁿ to Save

Untick old layer & select new layer →

Right click → Properties → Symbology →

Singleband Pseudocolor → -20000 to 6000

Discrete → -2000, -10, 10, 600

Raster → Miscellaneous → Merge
(To merge 4 images)

Practical-3

Open Street Map

view → Panel → Osm place search

Web → Openlayers Plugin → OpenStreetMap

OpenStreetMap

*To Search Place: Project → Properties →

Untick No Projection... → Search

for place

Practical-4

Terrain & Hill Shade

Add Raster layer → .tiff

coordinates: 86.92, 27.98, Scale: 900000

Raster → Extraction → Clip Raster by Extent

Input Layer: 10n060...

Clipping extent → browse → Use Canvas Extent

→ Save → Run

Deselect original → Select clipped layer

Raster → Extraction → Contour

Input Layer: Clipped

Interval: 100.00...

Attribute: ELEV

Save → Run

Contour layer → Properties → Label

Single Label → ELEV → Symbolology →

single symbol → Width (0.20...) → Apply

Open Attribute table → Arrange ELEV in
descending order → Select Row 1 click on
Zoom map to selected Rows

Raster → Analysis → Hillshade
Clipped extend (I/P layer)

Scale: 1.0

Azimuth: 315.0

Altitude: 45.0

Save → Run

Practical-5

Add Vector Layer → Select re-10nm...zip

Layer → Save As (Format: ESRI Shpfile, File name,
CRS: North America Albers equal...)

Run → Deselect original image.

Add Raster Layer → Select MuniScale.tif

Project → Properties → CRS → British National Grid

Run

Practical-6

B.7 GeoReferencing Aerial Imagery

Install Plugin OSM

Web → openlayerplugin → OSM → OSM

Project - Properties → Set CRS to EPSG 3857

View → Panels → Select OSM Place search

Search your Place → Double Click on it

Raster → Georeferencer

File → Open Raster → Select Your Place.tif

Edit → Add Point

Setting → Transformation Settings

Transformation Type: Thin Plate Spline

Target SRS: Project SRS

o/p Raster: Browse → Name File.tif → ►

Practical-7

→ Table joins

Add vector layer → tract.zip

Add Delimited Text Layer → Select.csv file → tick semicolon, comma → no geometry → add

Right Click Layer → Properties → joins → +

Join Layer: Popula", Join Field: GeoId2,

Target Field GEOID → OK

Select layer → Properties → Symbology →

Graduated → Column: tract_pop... →

Mode: Equal Interval → Classes: 5 →

Classify → Apply → OK

→ Spatial Joins

Vector layer → Select (2) .shp files

Attribute table

Vector → Data Management tools → Join Attribute by locaⁿ

JIP Layer: nybb...

Join Layer: OEM-Nursing Home...

Fields to add → Browse → Select all → OK →

Run

→ Points in Polygon Analysis

Add Delimited Text Layer → Eq.txt

Custom → Tick tab → Point coordinates:

Longi (X), Lat (Y) → Add

Layer → Add Delimited Text Layer → Select countries.zip file

Vector → Analysis Tools → Count Points in Poly

Polygon: ne_10m

Points: Earthquake . . .

Weight field: Location-Name
Country

Save → Run

→ Performing Spatial Queries

Add Vector Layer → Add (2) .shp file

Project → Properties → Set CRS "World-Azimuthal

Vector → Georeferencing Tool → Buffer

JTP Layer: ne_10m

Distance: 0.02

Save → Run

Vector → Research Tools → Select by Locⁿ

Select features: Buffered

By comparing features from: ne_10m - simple..

Run