



Answer All questions

All necessary data are available in CMS. Download them from the link. (CST 472 Exam Data)

Create a folder with your index no [eg. IIT08-100 / CST08-100] in the working drive

Save all your work in your working directory

After you complete, zip your working directory and upload the zipped folder on to CMS

Please remove the Kandy.jpeg file from your working directory just before zipping

Part B – Two (02) hours – 50 marks

1.

I. Georeference the given topographic map (Kandy.jpeg).

Corner coordinates (min X,Y and max X,Y) of the map are 177000mE, 22800mN and 192000mE,238000mN respectively.

A 1 km spaced grid is overlaid on the map

II. Create following four (4) shape files (assign SL_grid_99.prj coordinate system for shape files)

- Towns.shp
- Roads.shp
- Railways.shp
- Streams.shp

Use the georeferenced Kandy topographic map as the base map and

- ✓ Digitize Kandy, Peradeniya, Katugastota, Tennekumburu, Nattaranpotha, Peradeniya botanical garden and four other towns/ places as points
- ✓ Digitize A1 , A9, A10, A26 and B39 main roads
- ✓ Digitize the Railway track
- ✓ Digitize the Mahaweli ganga

III. Prepare a layout map with legend, grid coordinates, scale bar, north arrow, and a title for the Kandy area with ONLY your digitized shape files. (remove the base map)

- ✓ Name all the features you digitized

- ✓ Insert your index number (eg.CST08-100/IIT08-100) as a text at the bottom Left corner of the map
- ✓ Export the layout map as a jpeg file with your index number (egQ1_CST100.jpeg or Q1_IIT100.jpeg)

(30 marks)

2. Prepare a layout map containing towns, main roads and railways in Central Province of Sri Lanka

- ✓ Use Dist_Pop.shp, Roads.shp, railways.shp and towns.shp Shape files
- ✓ Insert a title, north arrow, legend, coordinated grid and a scale bar to the map
- ✓ Insert your index number (eg.CST100/IIT100) as a text at the bottom right corner of the map
- ✓ Export the layout as a jpeg file with your index number (eg.Q2_CST100.jpeg or Q2_IIT100.jpeg)

(10 marks)

3. Select a suitable land area for a proposed building construction within 5km from Kandy Town and within 2km from A1 and A9 main roads

- ✓ Use shape files that you have created in Question 1
- ✓ Prepare a layout map with grid coordinates, scale bar, north arrow, and a title for the proposed land are
- ✓ Insert your index number (CST08-100/IIT08-100) as a text at the bottom Left corner of the map
- ✓ Expoert the layout map as a jpeg file with your index number (Q3_CST100.jpeg or Q3_IIT100.jpeg)

(10 marks)