

## **๑.๖.๔๒.๔ Engineering surveying**

**General introduction on surveying, measurements of lines by tape, Tap correction, Leveling, Temporary adjustment of a level, permanent adjustment of a level, difference in height between two points, Rise and fall method, height of collimation method, reciprocal leveling, effect of curvature and refraction on leveling, errors in leveling, longitudinal sections (profile leveling) , cross-sections , area of cross-sections , volumes of earth works, volumes of contour lines, correction for volumes, theodolite, total station, directions, traverse, traverse adjustment, photogrammetry and remote, global positioning system (GPS), geographic information system (GIS).**