MBATA JOHNVIANNEY CHIMAROKE

16/ENG03/040

CIVIL ENGINEERING

CVE310

ASSIGNMENT

1. BENEFITS OF GPS OVER OTHER FORMS OF EQUIPMENT FOR MEASUREMENTS

* It is highly accurate and processes fast: The GPS technology supports the surveying process by providing data with highest accuracy due to the multi-channel design. This equipment is also faster when compared with conventional surveying equipment.
* It reduces cost and saves labor technique
* It’s portability gives it advantage over other measuring equipments.

1. TYPES OF ERRORS ASSOCIATED WITH ABSOLUTE GPS POSITIONING MODE

* Ephemeri’s Error: It describes the difference between the expected and actual orbital position of a GNSS satellite. Because GNSS receivers use the satellite location in pseudorange calculations, orbital errors reduces GNSS accuracy
* Clock Error: It is caused by the satellite oscillator not being synchronized to the GPS time and it is one of the main errors which affects the positioning accuracy.
* Atmospheric Error: Inconsistencies of atmospheric conditions affect the speed of the GPS as the pass through the earth’s atmosphere, especially the ionosphere.