FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

SCHOOL OF ENVIRONMENTAL TECHNOLOGY

DEPARTMENT OF SURVEYING & GEOINFORMATICS

SECOND SEMESTER EXAMINATION 2018/2019 SESSION

COURSE: SVG 322- GEODETIC SURVEYING I

TIME ALLOWED: 2 Hrs.

INSTRUCTION: ANSWER QUESTION ONE(1) AND ANY OTHER TWO (2) QUESTIONS

1 a. Observation were made from a satellite station 198m from C, as shown below

STATION	FACE	SIGHT	HORZONTAL CIRCLE READINGS
	L	A	00° 00' 00"
S	L	B	68° 52' 30.35"
	L	C	288° 14' 00.00"

The approximate length of sides AC and BC being 62,182m and 74,284m respectively. Calculate the angle ACB Diagram attract marks.

b(i) Discuss in details the concept of GNSS Positioning

(ii) Discuss the GPS sources of Error

2a (i) Explain the Design of 1st and 2nd order control network using Traverse methods.

(ii) Explain the measurement modes in GNSS observation and Mention the measurement Bands and signals used in GNSS observation.

b(i) Give 5 Examples of currently available geodetic receivers and their features.

(ii) Differentiate between space segment and control segment of the GPS.

3 (a) Write an explanatory note on the following

i) Baseline measurement
ii) Satellite computations
iii) GNSS Data processing

b (i) Explain the field procedures for geodetic levelling.

(ii) What are the considerations for leveling routes.

4 Discuss the following height concepts

i) Spirit leveling
ii) Orthometric Height
iii) Geoidal Height
iv) Dynamics Heights
v) Normal Height

b(i) Mention the consideration for establishing triangulation networks

(ii) What are the merits and demerits of passive and active control.

GOOD LUCK.