FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF ENVIRONMENTAL TECHNOLOGY
DEPARTMENT OF SURVEYING & GEOINFORMATICS
SECOND SEMESTER EXAMINATION 2017/2018 SESSION

COURSE: SVG 322- GEODETIC SURVEYING I
TIME ALLOWED: 2Hrs.
INSTRUCTION: ANSWER QUESTION ONE(1) AND ANY OTHER TWO (2) QUESTIONS

1 a. Directions were observed from a satellite station 204m from a station C as showed below.

STATION	FACE	SIGHT	HORZONTAL CIRCLE READINGS
	L	A	00° 00' 00"
S	L	B	71° 54' 32.25"
	L	C	296° 12' 00.00"

The approximate length of AC and BC being 54,072m and 71,283m respectively. Calculate the angle ACB. Diagram attract marks.

b(i) Discuss the sources of Errors in GNSS positioning.

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

2a(i) Discuss in details the concept of GNSS Positioning.

(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) In a tabular form, compare the space segment and control segment of the four main GNSS Satellite system.

3 (a) Write an explanatory note on the following
   i)   Baseline measurement
   ii)   Satellite computations
   iii)   Automatic level
   iv)   Levelling staves
   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.