DEPARTMENT OF SURVEYING AND GEOINFORMATICS

SCHOOL OF ENVIRONMENTAL TECHNOLOGY

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.

SEMESTER: 2nd Semester Examination 2018/2019 Session.

COURSE TITLE: Photogrammetry II **COURSE CODE: SVG 222**

TIME: 2 Hours

INSTRUCTION: Answer Any Four (4) Questions

1a) Using a simple experiment, derive the formula for focal height of a camera lens.
1b) In a bid to determine the focal height of a camera, the horizontal angle between two points A and B was determined as 28° 27' 26". If the camera was then exposed from the same point at which the angular measurement was done and the photo coordinate of A and B was found as; $x_a = 30mm$, $x_b = 35mm$, $y_a = 10mm$, $y_b = 18mm$. determine the focal height of the camera.

2a) What is Stereoscopy in Photogrammetry?
2b) List and explain types of Stereoscope.
2c) What are the problems involved when viewing a stereo?

3a) What is Rotation of Axes?
3b) With diagram, illustrate the geometry of a Vertical Photograph.
3c) Define the Scale of a vertical Photograph under; (i) Flat terrain (ii) Variable terrain.

4a) Write explanatory note on the following;
i) Trimetrogen Photograph (ii) Vertical Photograph (iii) Convergent Photograph
4b) a) With appropriate diagrams, derive the Collinearity equation.

5a) With appropriate diagrams, derive the Rotation equation.
5b) Write short note on following; (i) Monocular depth perception (ii) Binocular vision.
5c) What is parallax in aerial stereoscopic views?

6a) Give a brief account of stereoplotters from it invention till date.
6b) Derive the equation for height of relief displacement.
6c) What is average scale of a vertical photograph?