UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

FIRST SEMESTER EXAMINATIONS, NOV/DEC 2018

COURSE NO: GM 282
COURSE NAME: PHOTOGEOLOGY AND REMOTESENING
CLASS: GM II **TIME:** 3 HOURS

Name**:** _____Index Number: _____

Answer question one and two others

Q1 a. Give details about vertical aerial photographs. **[4 marks]**

b. What are digital numbers as expressed in remote sensing. **[4 marks]**

c. Explain the terms:

i. geometric fidelity

ii. spectral fidelity

iii. density slices

iv. ratio image **[8 marks]**

d. What are the observational criteria for Geologists in observing photographic images. **[4 marks]**

Q2 a. Describe the commercial remote sensing systems in terms of diagram, criteria, merits and demerits. **[12 marks]**

b. Describe the conceptualized model for remote sensing platforms. **[4 marks]**

[4 marks]

c. describe the parts of the spectrum available or useful to geologists. **[4 marks]**

Q3 a. Distinguish between active systems and passive systems. **[6 marks]**

b. What are the main characteristics in defining rocks on an aerial photograph or a satellite imagery in stereoview. **[6 marks]**

c. A stereo view with altitude 3500 ft and a focal length 151.5mm and an average distance between the two eyes being 66.5mm and parallax difference of 5.2mm. Determine the scale and height of an outcrop. **[8 marks]**

Q4 a. Using a diagram only, describe the steps for any landsat imagery to produce an orthoimage. **[10 marks]**

b. Distingush between a supervised and an unsupervised classification. **[10 marks]**

Dr E E Duncan / Dr S. Mantey