

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

SCHOOL OF NATURAL AND APPLIED SCIENCES

DEPARTMENT OF GEOGRAPHY

FIRST SEMESTER 2012/2013 SESSION UNDERGRADUATE EXAMINATION

COURSE CODE: REM 411 (3 units)

COURSE TITLE: SATELLITE METEOROLOGY

INSTRUCTIONS: Answer Question one (1) and any other 3 questions. Credit will be given for the use of specific examples and appropriate diagrams.

TIME ALLOWED: 3 Hours

- 1) Using the attached satellite imagery, attempt the following:
 - a) A line squall prevailing over Yola Nigeria at 1800 GMT has a speed of 50km/hr. Calculate the time it will take to reach Ibadan – a distance of about 900 km.
 - b) Compare the weather situation between Southern and extreme northern Nigeria.
 - c) Estimate the ITCZ position in the country.
- 2) Describe with clear illustration the formation and characteristics of West African Line squall.
- 3)
 - a) Distinguish between Active and Passive sensors.
 - b) Describe the types of satellites you know
- 4) Provide brief explanatory notes on any six (6) of the following:
 - a) Sensor
 - b) Payload
 - c) short wave
 - d) Long wave radiation
 - e) Swath
 - g) Satellite resolution
 - h) ITCZ/ITD
- 5) Prepare a treatise on the influence of ITCZ migration on weather and climate of Nigeria.
- 6) Distinguish between Conventional and Satellite-based meteorological observations and monitoring with emphasis on their merits and limitations.

125

ped

4-10-11

t

ma

11-12-11

WET

y

(s)

