

**DEPARTMENT OF GEOGRAPHY**  
**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**2<sup>ND</sup> SEMESTER EXAMINATION, 2012/2013 SESSION**

**COURSE CODE: MET 524**  
**COURSE TITLE: ADVANCED TOPICS IN TROPICAL METEOROLOGY**  
**TIME: 2 Hours 30 Mins**  
**INSTRUCTION: ANSWER ANY (4) QUESTIONS OF YOUR CHOICE**

- 1) Prepare a detailed treatise on the major differences between weather systems in the Tropics and those in extra-tropical areas.
- 2)
  - a. Distinguish between Thunderstorm and a Line squall.
  - b. Explain the reason behind the different duration of line squall systems.
- 3) Discuss with clear illustrations the relevance of Lapse rates in the stability and instability of the atmosphere.
- 4) Attempt a justification for the recent advances in technology which are having tremendous impacts on the observation and prediction of severe tropical weather systems.
- 5) What are Tropical Cyclones? Describe their geographical and seasonal distributions.
- 6) Describe the Collision and Coalescence process and how each affects growth of cloud droplets in tropical clouds.