

**DEPARTMENT OF GEOGRAPHY**  
**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**1<sup>ST</sup> SEMESTER EXAMINATION, 2011/2012 SESSION**

**COURSE CODE:** MET 511  
**COURSE TITLE:** ADVANCED PHYSICAL METEOROLOGY  
**INSTRUCTION:** ANSWER ANY FOUR (4) QUESTIONS OF YOUR CHOICE

**TIME: 3 Hours**

- 1) Draw and explain annual mean wind and pressure pattern from the equator to the poles. How do these patterns shape the season in the Tropics?
- 2) Describe with clear illustration the formation and characteristics of West African Line squall.
- 3) Discuss with specific reference to Nigeria the relevance of Satellite technology on Improved Weather Forecasting and Prediction.
- 4) Provide brief explanatory notes on any six (6) of the following:  
a) Jet stream    b) Thunderstorms    c) Cyclones  
d) Anticyclone    e) sea surface temperature    f) Geotropic wind  
g) Drought    h) ITCZ/ITD
- 5) Prepare a treatise on the influence of ITCZ migration on weather and climate of Nigeria.
- 6) How does topography influence rainfall and temperature distribution over Jos and Mambila Plateau?