

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA  
SCHOOL OF SCIENCE AND SCIENCE EDUCATION  
DEPARTMENT OF GEOGRAPHY

SECOND SEMESTER 2011/2012 SESSION UNDERGRADUATE EXAMINATION

**COURSE CODE:** GRY 522 (2 Units)

**COURSE TITLE:** GEOGRAPHY OF WATER RESOURCES

**INSTRUCTIONS:** Answer any four questions

**TIME ALLOWED:** 2 ½ Hours

1. As a water resource manager, there is the need to construct a multipurpose reservoir in Jibia Katsina state. Enumerate and discuss the two critical climatic variables to be taken into consideration during the design process.
2. Discuss the two methods used in the measurement of precipitation (rainfall) at a point using Minna, Niger State as a reference point.
3. When ground water must be pumped from an aquifer, the rate at which water flows in from surrounding rock to replace that which is extracted is generally slower than the rate at which water is taken out. Critically examine the environmental effects of ground water withdrawal in the dry, sub-humid zones of Nigeria.
4. The hydrologic cycle has been described as the most important consideration in water resource management. Expatiate
5. Rainfall interception has been found to differ significantly between the urban and rural environment. Explain the major difference using Minna (urban) and Beji (rural) as case study.
6. The 1986 flood in Minna Township took a heavy toll on human lives and property which necessitated the construction of drainages criss-crossing the township. Enumerate and discuss the effects of the channelized River/streams at locations downstream of channelized sections.