

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

SECOND SEMESTER 2013/2014 SESSION UNDERGRADUATE EXAMINATION

COURSE CODE: GRY522 (2UNITS)

COURSE TITLE: HYDROLOGICAL AND WATER RESOURCES MANAGEMENT

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS. CREDIT WILL BE GIVEN FOR RELEVANT ILLUSTRATIONS AND EXAMPLES

TIME ALLOWED: 2½HOURS.

1. When ground water must be pumped from an aquifer the rate at which water flows in from surrounding rock to replace which that is extracted is generally slower than the rate at which water is taken out. Critically examine the environmental effect of ground water withdrawal in the dry sub-humid zones of Nigeria.
2. As a water resource manager, there is a need to construct a multipurpose reservoir in Giwa Kaduna state. Enumerate and discuss any two critical climatic variables to be taken into consideration during design process.
3. Rain fall interception has been found to differ significantly between the urban and rural environment. Explain the major differences between them.
4. The 2012 flood in Lokoja township took a heavy toll on lives and property which necessitated the construction of drainages criss crossing the township. Enumerate and discuss the effect of the channelized river stream at location downstream of channelized section.
5. Data of M.I budgko 1971 express the global water balance as the average annual water flux in and out of world land area and World Ocean. Discuss.
6. Discuss the importance of studying evaporation and factors that affect it?