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**DEPARTMENT OF GEOGRAPHY  
FEDERAL UNIVERSITY OF TECHNOLOGY MINNA  
SECOND SEMESTER UNDERGRADUATE EXAMINATION 2019/2020 SESSION**

**COURSE CODE:** GRY 522

**COURSE TITLE:** Geographical Water Resource Management

**INSTRUCTION:** Answer Any Four (4) Questions

**TIME ALLOWED:** 2 hours 30 Minute.

1. As a water resource manager, there is need to construct a multipurpose reservoir in Giwa Kaduna state, enumerate and discuss the two critical climate variables to be taken into consideration during the design process.
2. When ground water must be pumped from an aquifer, the rate at which water flows from surrounding rock to replace that which is extracted is taken out. Critically examine the environmental effect of ground water withdrawal in the dry sub humid zones of Nigeria.
3. Rain fall interception has been found to differ significantly between the urban and rural environment. Explain the major differences using Minna (urban) and Kataregi (rural) as case studies.
4. Discuss the major components and uses of water balance.
5. The 1986 flood in Minna Township took a heavy toll on lives and property which necessitated the construction of drainage criss-crossing the township. Enumerate and discuss the effects of the channelized river/stream at location downstream of channelized section.
6. Enumerate and discuss the factors that affect Run off process.

**Good luck**