

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**Plot 91, Cadastral Zone, NnamdiAzikwe Expressway, Jabi, Abuja**

**FACULTYOF SCIENCES**

**JULYEXAMINATIONS 2017**

**COURSE CODE:** ESM 423**TIME:** 21/2HOURS

**COURSE TITLE:** HYDROLOGY AND WATER RESOURCES **CREDIT UNIT:** 2

**Instruction:** Attempt question number one (1) and any other three (3).

Question number one (1) is compulsory and carries 25 marks, while the other questions carry equal marks (15) each

1a. Explain the concept of hydrological cycle (11mks)

b. State three types of precipitation and discuss one of them (6mks)

c. Identify four sources of water in tropical region (8mks)

2a. Outline four causes of urban flooding (6mks)

b. Discuss the factors influencing surface water runoff (9mks)

3a. Identified two components of interception (5mks)

b. Discuss five factors of the variation in interception (10mks)

4a. State five conditions responsible for soil moisture variation (5mks)

b. Explain five factors that determine variation in infiltration (10mks)

5a. Discuss five negative impacts of multipurpose water project (10mks)

b. Explain the term ‘evapotranspiration’ (5mks)