

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
SCHOOL OF AGRICULTURE & AGRIC. TECHNOLOGY
DEPARTMENT OF SOIL SCIENCE AND TECHNOLOGY
2014/2015 HARMATTAN SEMESTER EXAMINATION
SST 411: WETLANDS AND MITIGATION

TIME Allowed: 3hrs. Answer Question N0. 1 and any 4 others.

QUESTION 1 should be answered first (30 minutes). The answer sheet should then be submitted to the Chief Examiner. Then proceed to answer the other four questions. Ensure you write your name and Registration Number on the front page of your answer sheets.

ANSWER THE FOLLOWING QUESTIONS:-

QUESTION 1

- (a) In Southeastern Nigeria, wetland soils occur in a number of geomorphic sites. One of them is flood plain. Name 3 other geomorphic sites where wetland soils can be found.
- (b) Wetland soils frequently have poor or impeded drainage. State and explain two factors that are responsible for this.
- (c) Wetland soils of flood plains in riverine communities of Nigeria are frequently saline in nature.
 - i. What does this mean?
 - ii. How can this problem of salinity be alleviated for profitable food crop production in those areas?
- (d) Name 2 food crops and 2 tree crops that commonly grow or can be cultivated on wetland soils.
- (e) The Niger Delta area of Nigeria is rich in wetland soils which have high native fertility status. State 2 factors accounting for this high native fertility of wetland soils.
- (f) Soils in Southeastern Nigeria frequently occur in a sequence along the landscape, in what is known as Toposequence. (i)What are the names given to the recognized sections of a Toposequence? (ii)Which of them does a wetland usually occupy?



- (g) Wetlands also occur in the Northern parts of Nigeria. What is the name given to wetlands in the dry Northern part of Nigeria?
- (h) What do you mean by the term littoral wetland?

QUESTION 2 (a). Define the term wetland?

(b). A Wetland is sometimes also described as a Wasteland. Discuss.

QUESTION 3. In wetland delineation, explain the characteristics that a Scientist looks out for which indicate the existence of a wetland.

QUESTION 4 (a). Define the term Ecosystem and state why a wetland may be regarded as an Ecosystem.

(b) List and explain the functions of a wetland to an ecosystem and to the society.

QUESTION 5 (a). State and explain 3 factors that favour the occurrence of wetlands anywhere in the world.

(b). What factors discourage the widespread utilization of wetlands for crop production in Nigeria (give at list 4 factors)?

QUESTION 6 (a). Define the term hydromorphic soil

(b). A hydromorphic soil, like its upland counterpart, has a number of properties which are usually grouped into (i). Physical Properties, (ii) Chemical properties (iii) Biological properties and (iv).Mineralogical Properties.

Give 2 examples of each of the above groupings.

(c). State 3 ways in which hydromorphic soils differ from upland soils.

(d). What do you mean by the term hydrophytic plant? Give 2 examples.

