



NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCE
2025_2 EXAMINATIONS

COURSE TITLE: WATERSHED HYDROLOGY (2CU)

COURSE CODE: SLM 310

TOTAL SCORE: 70 MARKS

INSTRUCTION: Answer 3 questions in all

Question 1 is compulsory (30 marks) and any other TWO questions (20 marks each)

TIME ALLOWED: 2 Hours.

1 Discuss briefly the under listed important factors of hydrology and watershed

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|--------------------|---------|
| i. Ground water | 4 marks |
| ii. Water body | 4 marks |
| iii. surface water | 4 marks |
| iv. Aquifers | 4 marks |

1 b What are the process you will take in rehabilitating degraded and excessively eroded watersheds. 5 marks

1c. Explain any 2 ways by which a river transports its load. The drawing of the diagramme of water transportation will be an added advantage 9 marks

2a Watersheds are associated with certain problems. Kindly explain them to your community heads and market women (12 marks) .

2b Draw of typical hydrologic cycle showing the various components (5 marks)

2 c, Itemize the climatic factors that influence the shape of a hydrograph **3 marks**

3 Briefly explain the following important characteristics of a watershed

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|---------------|------------------------------|
| i. Vegetation | 2^{1/2} marks |
|---------------|------------------------------|

- ii. Shape **2^{1/2} marks**
- iii. Topography **2^{1/2} marks**
- iv. Climate **2^{1/2} marks**
- v. Land use **2^{1/2} marks**
- vi. Size (area) **2^{1/2} marks**
- vii. Geology, **2^{1/2} marks**
- viii. length **2^{1/2} marks**

4a. Explain any three variables that affect watershed formation and maintenance 15 marks

b Of what importance is watershed to mankind 5 marks