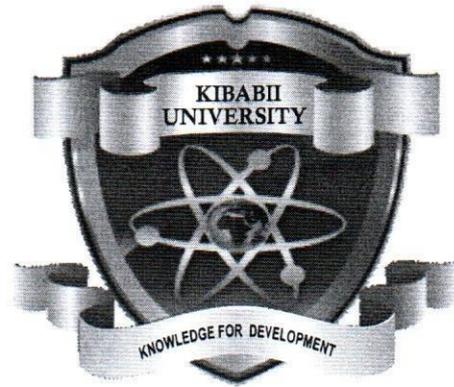


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(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR

FOURTH YEAR 2ND SEMESTER
MAIN EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE AND
BIOTECHNOLOGY**

COURSE CODE: SAB 415
COURSE TITLE: SOIL AND WATER CONSERVATION

DATE: 13TH NOVEMBER 2020 **TIME: 9AM – 11AM**

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

1. (a) Define the following terms (7 marks)
(i) Silviculture (ii) Renewable resource (iii) New resource (iv) Sustainable agriculture
(b) State the sediment yield rate factors of a watershed with reference to the Universal Soil Loss Equation (USLE) (8 marks)
(c) On a 30 % hill slope, it is proposed to construct bench terraces. If the vertical interval of terrace is 1.5 m, calculate length of terrace per hectare, given the following equation:

$$D = \frac{WS}{100}$$

where S is the land slope in percent; D is the vertical interval and W is the width of terrace. (5 marks)

- (d) (i) Give two ways in which water harvesting can benefit a community (2 marks)
(ii) Describe the types of water harvesting practiced in your resident Sub-county (8 marks)
2. Discuss the socioeconomic and environmental concerns leading to the Kenya Govt. Gazette Notice No. 1938 dated February 26, 2018 extending the ban on logging (20 marks)
3. State six sources of sediments and exhaustively discuss the factors affecting sedimentation of the water resources (20 marks)
4. List and explain the socioeconomic and environmental impacts of Pan paper mills, Webuye before closure in 2009. (20 marks)
5. Write brief notes on known water pollutants and explain their specific effects (20 marks)