



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF SPATIAL PLANNING**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF ARTS IN**  
**SPATIAL PLANNING**  
**SEMESTER 2016/2017 ACADEMIC YEAR**

**CENTRE: MAIN CAMPUS**

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**COURSE CODE: PSP 3322**

**COURSE TITLE: PLANNING FOR WATER AND SEWERAGE**

**EXAM VENUE:**

**STREAM: SPATIAL PLANNING**

**DATE:**

**EXAM SESSION:**

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer question 1 ( compulsory ) and ANY other 2 questions.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

### **Section A**

1. (a) Explain the following terms as used in water and sewerage planning.
- (i) Hydrology (4 marks)
  - (ii) Meteorology (4 marks)
- (b) Discuss any five applications of meteorology and how they relate to spatial planning. (10 marks)
- (b) Outline any four natural changes in the quality of surface water. (8 marks)
- (c) Using relevant examples differentiate between organic wastes and in-organic wastes as applied to planning for water and sewerage. (4 marks)

### **Section B**

#### **Answer only two questions**

2. Discuss any five challenges in the water sector in Kenya and how each can be addressed from a planning perspective. (20 marks)
3. (a) Explain the purpose of water quality monitoring in Kenya. (5 marks)
- (b) Discuss any five major sources of water pollution in Kenya today. (15 marks)
4. Discuss the mechanism for an integrated approach to land and water resources, planning and management. (20 marks)
5. (a) Explain any three planning interventions that may be necessary in improving the quality of surface water. (9 marks)
- (b). Discuss the basic characteristics of quality drinking water. (11 marks)