****

**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF SPATIAL PLANNING**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN WATER RESOURCE AND ENVIRONMENTAL MANAGEMENT**

**SEMESTER 2016/2017 ACADEMIC YEAR**

**CENTRE: MAIN CAMPUS**

**COURSE CODE: PWE 3411**

**COURSE TITLE: CONSTRUCTION MANAGEMENT I**

**EXAM VENUE: STREAM: SPATIAL PLANNING**

**DATE: EXAM SESSION:**

**TIME: 2 HOURS**

**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.**

**QUESTION ONE**

1. Define dimensional co-ordination. (2 marks)
2. Explain the main principle behind dimensional co-ordination. (2 marks)
3. Outline any **TWO** advantages of dimensional co-ordination (4 marks)
4. Discuss any **FOUR** societal requirement of a building. (4 marks)
5. Explain the following terms.
6. Substructure (2 marks)
7. Super structure. (4 marks)
8. Explain the role of the following in a building team
9. Clerks of works (2 marks)
10. Contractor. (3 marks)
11. Outline the tasks to be performed by a builder once he/she has the possession of the site. (9 marks)

**QUESTION 2**

1. Define sustainable development. (2 marks)
2. Explain the primary pillars of sustainable construction in development. (4 marks)
3. Outline **FOUR** advantages of sustainable development in the construction industry.(4 marks)
4. Explain the meaning of statutory requirements and how are they prepared. (2 marks)
5. Explain the relationship between construction and the environment. (8 marks)

**QUESTION THREE**

1. Differentiate between the built environment and the general environment. (4 marks)
2. Explain any **TWO** disadvantages of civil construction to the environment, stating the need for environmental impact assessment before commencement of a construction project. (8 marks)
3. Explain any **FOUR** issues sustainable development should address. (8 marks)

**QUESTION FOUR**

1. With the aid of sketches outline the process of cement manufacture. (8 marks)
2. Define the term timber conversion. (2 marks)
3. List any **TWO** defects found in timber. (2 marks)
4. Outline any **FOUR** objectives of monitoring and evaluation in construction project. (8 marks)

**QUESTION FIVE**

1. Outline any **FOUR** advantages of having a construction plant on site. (4 marks)
2. Explain any **THREE** importance of using concrete mixing plant on site as opposed to hand mixing. (6 marks)
3. Discuss how well one would reclaim an abandoned quarry site. (4 marks)
4. Sketch and label any excavation plant. (6 marks)