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**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH AND BACHELOR OF SCIENCE IN COMMUNITY HEALTH**

**SEMESTER 2016/2017 ACADEMIC YEAR**

**CENTRE: KISUMU CAMPUS**

**COURSE CODE: PSP 3214**

**COURSE TITLE: GEOGRAPHIC INFORMATION SYSTEMS**

**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 1**

1. Discuss “Hardware” as one component of GIS (10 marks)
2. Discuss the impact of the satellite technology on GIS (10 marks)
3. Using suitable examples differentiate between point, line and areal features. (10 marks)

**Question 2**

1. Using suitable examples, explain the difference between attribute and spatial data. (10 marks)
2. Outline the components of data quality championed by the National Standard for Digital Cartographic Data for adoption worldwide. (10 marks)

**Question 3**

1. Explain how a GPS receiver works (10 marks)
2. State the disadvantages of using GPS as a source of data for a GIS (10 marks)

**Question 4**

Manual digitizing is a convenient method of capturing vector data from existing analogue maps. Outline the steps involved in manual digitizing. (20 marks)

**Question 5**

Discuss the benefits of integrating GIS in public/community health planning. (20 marks)