



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR SCIENCE IN**  
**INFORMATION SYSTEMS**  
**3<sup>RD</sup>YEAR 1<sup>ST</sup> SEMESTER 2015/2016 ACADEMIC YEAR**  
**MAIN CAMPUS**

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**COURSE CODE: IIS 3213**

**COURSE TITLE: SYSTEMS AND BUSINESS ORGANIZATION**

**EXAM VENUE:**

**STREAM: BIS**

**DATE: 27/04/ 2016**

**EXAM SESSION: 2.00 – 4.00 PM**

**TIME: 2.00 HOURS**

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**INSTRUCTIONS:**

- 1. Answer Question 1 (Compulsory) and ANY other two 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 ( 30 MARKS)

- a) Using an illustration, explain the Porters Value chain framework and how it can businesses have a competitive edge {6 marks }
- b) Outline ANY FOUR core principles of BPR {4 marks }
- c) Discuss the following emerging issues with respect to businesses today
- i. Regulatory Trend. {2 marks }
  - ii. Interoperability {2 marks }
  - iii. Outsourcing {2 marks }
  - iv. Infrastructure {2 marks }
  - v. Emerging Technologies {2 marks }
- d) What are the four main functions of management in a business setup {4 marks }
- e) ***“Management is needed in all types and sizes of organizations, at all organizational levels, and in all organizational work areas throughout the world. Furthermore all employees of an organization either manage or are managed”.*** What are the rewards and/or challenges of being a manager {6 marks }

### QUESTION TWO [20 MARKS]

- a) As a student undertaking BIS, you have noted with serious concern that a lot of time is wasted by fresher’s on admission. You are contemplating on coming up with a web based system that fresher’s can use to ease the process but most importantly make the process efficient, faster and seamless. Outline how you would go about achieving this objective. {12 marks }
- b) Discuss the following management approaches {8 marks }
- i. Quantitative approach
  - ii. Organizational behavior
  - iii. Systems approach
  - iv. Contingency approach

### QUESTION THREE [ 20 MARKS]

- a) Using examples of existing firms, clearly outline where the following information systems can be used and indicate the type of decisions elicited from the systems. {6 marks}
- i. Management Information Systems
  - ii. Decision Support Systems
  - iii. Executive Information Systems
- b) DSS can use a set of modelling software's for decision making. List THREE of this software's clearly explaining how they are used for decision making. {9 marks}
- c) How are the following systems used: {5 marks}
- i. Artificial Neural Networks (ANN)
  - ii. Fuzzy logic

### QUESTION FOUR [20 MARKS]

- a) What are the potential pitfalls of prototyping in systems development {8 marks}
- b) Define BPR and clearly state two ways in which it affects a firm's IT operations {6 marks}
- c) Explain how the following system development tools are used {6 marks}
- i. Data flow diagrams
  - ii. Use case
  - iii. Gantt Chart

### QUESTION FIVE [ 20 MARKS]

- a) Using a diagram explain the six sigma framework clearly explaining the DMAIC stages {10 marks}
- b) Hammer and Champy in 1993 define BPR as **“The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed”**. Building from this definition give examples of one Kenyan company and one international company that have successfully implemented BPR. {10 marks}