



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**  
**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**  
**UNIVERSITY EXAMINATION FOR THE DOCTOR OF PHILOSOPHY IN BUSINESS**  
**INFORMATION SYSTEMS**  
**1<sup>ST</sup> YEAR 2<sup>ND</sup> SEMESTER 2022/2023 ACADEMIC YEAR**  
**MAIN/KISUMU CAMPUS**

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**COURSE CODE:** IIS 6113  
**TITLE:** INFORMATION SYSTEMS THEORY, PROBLEM SOLVING, AND DECISION MAKING  
**DATE:** 15/1/25  
**EXAM SESSION:** 14-17.00 HRS  
**DURATION:** 3 HOURS

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**INSTRUCTIONS.**

- 1. Answer any THREE questions.**
- 2. Candidates are advised not to write on question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**
- 4. Mobile devices like mobile phones and lap tops are NOT allowed into the Examination room.**

**QUESTION ONE****(20 MARKS)**

- (a) Problem solving is critical to the success of any organization.
- i. Real world problems are usually messy, ill-structured – Why? (4 Marks)
  - ii. What is a nice problem? (4 Marks)
- (b) Despite the guarantee that order delivery of wine in any county could be reduced to a maximum of ff 4 days, Mombasa based customers have been complaining about waits of up to 1 week. After an investigation and tracking of orders during the August month it was validated that 60% of the orders took between 3 days to 7 to reach their destination. Requests for information from the airport reported five seasonal delays in flights due to fog as Old wines and spirits booked all freight on early morning deliveries and a one week long industrial dispute. The impact of the dispute was to cancel all Tuesday, Thursday and Friday morning flights and to cause delays of up to ff hours on Monday, Wednesday, Saturday and Sunday.
- i. What is the difference between problem symptoms and problem causes? (4 Marks)
  - ii. State the problems and symptoms that Old wines must work on to improve their wine deliveries. (5 Marks)
- (c) Give THREE benefits of Systems Thinking. (3 Marks)

**QUESTION TWO****(20 MARKS)**

- (a) Brainstorming is a key element in problem solving procedures. Discuss THREE specific rules that should be followed during brainstorming sessions. (6 Marks)
- (b) What are THREE examples of Systems thinking in real life? (6 Marks)
- (c) List and explain THREE key mechanism of Institutional Theory. (6 Marks)
- d. Give the importance of logical modeling. (2 Marks)

**QUESTION THREE****(20 MARKS)**

- (a) Managers are paid to make decisions, but they are also paid to get results from these decisions. Discuss. (5 Marks)
- (b) Discuss FOUR benefits of Information Systems Theory (IST). (8 Marks)
- (c) Group support systems are critical when one person decision is not tenable. For group decision making to succeed, many factors must be considered. What FIVE factors should one consider? (5 Marks)
- (c) What is the importance of a decision support plan? (2 Marks)

**QUESTION FOUR****(20 MARKS)**

- (a) Every decision is a forecast of the future. Discuss. (5 Marks)
- (b) Any system has THREE basic properties. Explain Them. (6 Marks)
- (c) Decision support technology is changing and evolving very rapidly. Explain. (5 Marks)
- (d) How do collaborative support tools aid in making informed decision? (4 Marks)

**QUESTION FIVE****(20 MARKS)**

- (a) One potential error managers make is failing to account for the higher degree of uncertainty inherent in complex situations. Explain what can cause this situation to occur. (5 Marks)
- (b) Life is about choices. Give distinct differences between choices and decisions. (5 Marks)
- (c) There are a number of decision theory elements. Explain THREE. (6 Marks)
- (d) How do managers handle uncertainty when making unstructured decisions? (4 Marks)

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