



**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR SEPTEMBER/DECEMBER 2019/2020 FOR BACHELOR OF  
SCIENCE IN COMPUTER SCIENCE**

**COURSE CODE: RCS 403    COURSE TITLE: COMPUTER AND THE SOCIETY**

DATE \_\_\_\_\_

TIME: 2 HOURS

**GENERAL INSTRUCTIONS:**

Students are NOT permitted to write on the examination paper during examination time.

This is a closed book examination. Text book/Reference books/notes are not permitted.

**SPECIAL INSTRUCTIONS:**

This examination paper consists Questions in Section A followed by section B.

Answer Question 1 and any Other Two questions.

QUESTIONS in ALL Sections should be answered in answer booklet(s).

1. **PLEASE start the answer to EACH question on a NEW PAGE.**
2. **Keep your phone(s) switched off at the front of the examination room.**
3. **Keep ALL bags and caps at the front of the examination room and DO NOT refer to ANY unauthorized material before or during the course of the examination.**
4. **ALWAYS show your working.**
5. **Marks indicated in parenthesis i.e. ( ) will be awarded for clear and logical answers.**
6. **Write your REGISTRATION No. clearly on the answer booklet(s).**
7. **For the Questions, write the number of the question on the answer booklet(s) in the order you answered them.**
8. **DO NOT use your PHONE as a CALCULATOR.**
9. **YOU are ONLY ALLOWED to leave the exam room 30minutes to the end of the Exam.**
10. **DO NOT write on the QUESTION PAPER. Use the back of your BOOKLET for any calculations or rough work.**

### **QUESTION 1: (COMPULSORY 30 MARKS)**

- a) Discuss how computers in society have increased the potential of privacy invasion **(2 Marks)**
- b) Explain the number of inter-related concepts in Digital Inclusion **(2 Marks)**
- c) Digital Transformation within the Kenyan government presents major risks particularly data leakage and fraud. What can be done to reduce these cases? **(5 Marks)**
- d) Describe an ethical, a social, and a political issue that has emerged after the enactment of the Data Protection Act of 2019. **(3 Marks)**
- e) Using relevant examples explain how computer systems have lowered ease of doing business **(4 Marks)**
- f) Explain the following terms: **(3 Marks)**
  - i. Digitization,
  - ii. Digitalization, and
  - iii. Digital Transformation (Dx)
- g) The following are Digital Transformation (Dx) focus areas, Content, People, Processes & Technology. Use one of the enablers of Dx to explain its direct impact to the society. **(4 Marks)**
- h) Explain the following terms in relation to recent trends in computer science; **(3 Marks)**
  - i. Information Disclosures
  - ii. Data Mining
  - iii. Consumer backlash
- i) Your friend Sally owns a fledgling online business selling homemade candles and scented items. She's been using the Internet in marketing and promoting her products using posts on social media platforms such as Facebook and Instagram. In the last one month, she has received several negative responses on her social media posts from clients complaining about different issues. She contacts you for help as she does not wish for her brand and products to be negatively affected by these startling feedback. Explain the ethical issues surrounding this as well as ways to resolve situation **(4 Marks)**

### **(CHOOSE ANY TWO QUESTIONS FROM 2 TO 4)**

### **QUESTION 2: (15 MARKS)**

- a) Which are some of the key initiatives used to bridge the Digital Divide in the healthcare industry in Kenya today? **(2 Marks)**
- b) Ni Ya Leo Ltd a local company has decided to offshore a Kshs. 20 million project to an experienced reputable firm in India. This is the first offshore outsourcing project of significant size that the company has run. In relation, answer the following questions:
  - i. What steps should the company take to ensure the timelines are adhered to? **(3 Marks)**

- ii. Give 3 reasons with examples why a System Analysis and Design methodology should be followed to ensure successful completion and deployment?  
**(6 Marks)**
- c) The Internet of Things (IoT) is an emerging topic of technical, social, and economic significance. Explain the key concepts that serve as a foundation for exploring the opportunities and challenges.  
**(4 marks)**

**QUESTION 3: (15 MARKS)**

- a) Describe and explain the three (3) critical issues facing organizations in the Cyber Security trend of 2019  
**(3 Marks)**
- b) Explain the term Gross Domestic Product (GDP) and highlight the impact of IT on the standard of living and worker productivity  
**(2 Marks)**
- c) Teleworking constitutes a growing population of recent graduates' idealist employment conditions. List four (4) advantages and disadvantages of teleworking employees  
**(4 Marks)**
- d) IT in the healthcare industry has been implemented across many hospitals in Kenya to facilitate information processing. However, patients have to store and present their medical records whenever they change hospitals. Explain how you would resolve this challenge Using one of the digital transformation enablers  
**(6 Marks)**

**QUESTION 4: (15 MARKS)**

- a) The gig economy is growing fast, and analysts say that this is only the beginning for developing economies like Kenya, as more apps and players enter the market offering even more choice for services.
  - i. Explain how Gig work is gradually changing the nature of how Kenya's works accesses jobs  
**(2 Marks)**
  - ii. Which are the barriers to the Gig economy's growth  
**(2 Marks)**
  - iii. Explore solutions which can be used to unlock growth of the Gig economy  
**(2 Marks)**
- b) Explain the social implications of computing in the below categories;
  - i. Politics and media  
**(2 Marks)**
  - ii. Social movements  
**(2 Marks)**
  - iii. Job implications  
**(2 Marks)**
- c) Identify areas of society where Information Technology has had a substantial impact and where its effects may be of concern  
**(3 Marks)**

**QUESTION 5: (15 MARKS)**

- a) Share a real-world example of a company that has in the recent past violated their users' privacy and discuss 3 ways in which the company might protect a user's privacy. **(3 Marks)**
- b) Discuss how information systems Cybercrime Bill 2018 have affected the online accountability, liability, and the quality of everyday life. **(3 Marks)**
- c) The era of big data is here to stay and with more companies inclined towards big data to run their operations, the demand for talent is at an all-time high. List and explain the five V's of Big data **(5 Marks)**
- d) Using relevant examples, describe actions being undertaken to reduce the negative influence of the digital divide? **(4 Marks)**