

# UGANDA MARTYRS UNIVERSITY

## FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

END OF SEMESTER FINAL ASESMENT

SEMESTER II, 2020/21

SECOND YEAR EXAMINATION FOR BACHELOR OF SCIENCE INFORMATION  
TECHNOLOGY (TAKE HOME EXAM)

WEB BASED SYSTEMS PROGRAMMING  
CSC 2202

**EXAM ADMINISTERED ON:** Monday, June 28, 2021

**PRESENTATIONS DATE:** Tuesday, July 06, 2021

**TIME:** 9:00am

**DURATION:** 5 Days

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***Instructions:***

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1. Carefully read through ALL the questions before attempting
  2. Both Sections A and B are compulsory.
  3. No **names** should be written anywhere in your report and presentation.
  4. Ensure that your **Registration Number** is indicated on all pages of the examination report in the footer.
  5. Ensure your work is **clear** and **readable**. Untidy work shall be penalized
  6. Plagiarism will be penalized according to the University policies and regulations
  7. Select a Group Leader and a Secretary to coordinate the tasks
  8. The Leader will represent the group in case of queries
  9. Distribute the work evenly among the group members
  10. You are encouraged to create a temporary WhatsApp group for each exam group to enable collaborations among members.
  11. Though the work is done as a group, each candidate is to hand in individually.
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## SECTION A (50 Marks)

**Develop the following program code:**

- a) Write a PHP program to display positive multiples of 5 less than 100. 10 marks
- b) Write a PHP program to display all integers in an array of size 10. 10 marks
- c) Write a PHP program to compute and display the total amount payable for an item costing 6000 and a VAT of 18%. 10 marks
- d) Write a PHP program to sort and display strings from an array of size 6. 10 marks
- e) Write a PHP program that produces a grade for a mark earned by a student using a scale for O' level secondary schools. 10 marks

Put all the code in one folder and name it *Section A –Registration Number*. Zip the folder and upload on Moodle.

## SECTION B (50 Marks)

*Read the description below and attempt the Questions that follow:*

You are required to look up an organization in your community; bank, SACCO, hospital, clinic, supermarket, school, or a club which may need to automate its business processes and develop a prototype for them. Make use of the following facts about it; name, type of business, positions and their responsibilities, groupings of items/persons. Main business activities, key information/document inputs and output, suppliers/partners and customers/subscribers where applicable. The candidate can alternatively suggest a project that may be adopted by an organization to solve its business need.

**Develop a web based system for the organization using the description above by coming up with the following:**

- a) Activity 1: An appealing welcome page with a login section on the welcome page with PHP code for authentication. 10 marks
- b) Activity 2: An intuitive switchboard that is displayed after successful login, with menus, or links to forms, reports and logging out of the system. 10 marks
- c) Activity 3: A MySQL database with at least five tables. 10 marks
- d) Activity 4: At least five forms and five reports accessible from the switchboard. 10 marks
- e) Activity 5: Security features for validation, authentication, encryption, session and management of SQL injections 10 marks

Zip the folder with the system files together with the exported database file and name it **Section B-Registration Number**

*Proper utilization of HTML/HTML5, CSS and JavaScript or related libraries will help candidates to get maximum marks.*

**Note:**

- This is a group project
- Each group should have at most five (5) members
- Though each group produces the same work, each member should submit individually quoting the group number.
- Each group will produce one presentation; then each member will be orally assessed. Failure to produce convincing answers will lead to exam failure for that particular candidate.

***All work should be submitted on Moodle by Saturday 3<sup>rd</sup>, June 2021 at 23:59 EAT***