



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**GROUP 2, CAT 1**

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**CONTINUOUS ASSESSMENT TEST**

**AUGUST-DECEMBER 2022 TRIMESTER**

**DEPARTMENT OF COMPUTER & INFORMATION SCIENCE**

**CMT 210: OBJECT ORIENTED PROGRAMMING I**

**Date: November 16, 2023**

**TIME: 2:45-3:45**

**INSTRUCTIONS:**

1. Before starting your CAT, create a folder on the Desktop bearing your registration number only. This is the folder where you will save all exam practical work
2. Answer all the questions in this CAT
3. Question 1 and 2 are theory questions and should be done on CAT question paper only
4. Question 3 is practical questions and must be done on the PC.
5. Ensure you submit your folder to the examiner at the end of exam period.
6. Confirm your work before handing in your work to the examiner.

1. Assuming you have a set named myset with a collection of x items, write a python code that:

i. Display all members of the set **[2 marks]**

ii. Removes an item named "pineapple" from the set and display an error if the item is not found in the set **[2 marks]**

2. Python is widely regarded as a general-purpose programming. Discuss TWO types of applications a developer can develop using the language. **[4 marks]**

3. You are supposed to create python-based program that captures information relating to a train i.e., train number, departure time, fare, destination, arrival time and departure day

**Required:**

- i Define a user defined function which captures the above information

**[3 marks]**

- ii Define another user defined function which shall allow a passenger search for available time using four parameters i.e., departure time, destination and departure day. If a train matches the above three parameters, the program should display train number, fare and arrival time else an appropriate message should be displayed for the user. Decisions shall be based on inputs captured information in 3i above **[7 marks]**
- iii Supply appropriate calling blocks for the above two functions **[1 mark]**
- iv Debug and test your program **[1 mark]**