

# PMAS Arid Agriculture University Rawalpindi

University Institute of Information Technology

## Mid Term Examination-Fall-2023

BSSE/BSCS – 5<sup>th</sup> (M/E)

Modern Programming Languages

CS-432

Registration No. \_\_\_\_\_

Total Time: 60 Minutes

Maximum Points: 12

### Instructions:

- Write your name and arid number on your answer sheet and question paper as well.
- Clearly mention Degree Program (BSCS), Semester (00) and Session (Morning or Evening) on Right Top Corner of your answer sheet.

### Question 01:

4 Marks

Write a Java program that allows the user to convert between different weather units using a graphical user interface (GUI). The GUI should have two text fields, one for input and one for output. The user should not be allowed to enter any value in the output text field. The GUI should also contain six buttons, each representing a specific weather conversion: Button 1 for Celsius to Fahrenheit, Button 2 for Fahrenheit to Celsius, Button 3 for Celsius to Kelvin, Button 4 for Kelvin to Celsius, Button 5 for Fahrenheit to Kelvin, and Button 6 for Kelvin to Fahrenheit.

4 Marks

### Question 02:

Consider a Note Book class, which is the base class that holds data fields named manufacturer ID (of integer type) and manufacturer Name (of string type). A two-argument constructor to initialize data-fields with user-defined values. Appropriate functions to set and get values of data fields.

Derive two classes from the Note Book class:

- **ENotebook:** which contains an attribute size of integer type and a setter member function to set size value.
- **PaperNoteBook:** which contains an instance variable named total pages along with a member function to set total number of pages in a certain paper notebook object.

Both derived classes have function display to show all data field values (including values inherited from the base class). In the main() function, create objects of ENoteBook and PaperNoteBook classes. Both object display all attributes and functionality of the respective class.

4 Marks

### Question 03:

Describe the following Java Concepts using proper Java Programming Code, no need of theoretical discussion.

- Implements and Extends
- Throw and Throws keyword
- StringBuffer class
- How can the FileWriter class be opened in append mode?

\*\*\*\*\*Good Luck\*\*\*\*\*