THE OPEN UNIVERSITY OF SRI LANKA
B.Sc/B.Ed Degree Programme
Applied Mathematics – Level 05
ADU5320 – Introduction to MATLAB software
No Book Test (NBT) – 2024/2025
DURATION: ONE (01)–HOUR

Date: 16.03.2025 **Time: 2.30 p.m.- 3.30 p.m.**

ANSWER ALL QUESTIONS.

1. a) Write a MATLAB program using a **while** loop to compute the sum of the first 30 terms of the series $\frac{1}{n^3}$, where n =1,2,3,..., and display the result.

   b) Write a user-defined MATLAB function, with one input and two output arguments, that converts the temperature from Fahrenheit (°F) to Celsius (°C) and Kelvin (K) for a given temperature in Fahrenheit.
   (**Hint**: Celsius = (Fahrenheit - 32) * 5/9 and Kelvin = Celsius + 273.15)

2. a) Write a MATLAB program using a for loop and an if condition to find the minimum value of a vector **v**. The program should work for vectors of any length.

   b) Modify the above MATLAB program to find both the minimum and maximum values of the vector **v** using a for loop and an if condition, and output both values within the same program execution.

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