BIRCHWOOD UNIVERSITY

Midterm Exam Question Paper

Course Name: Python Programming
Course Number: MDS500
Total Marks: 30
Note:
1. Every question carries 5 marks.
2. For questions that need explanation, please use markdown cells for writing the justification/answers.
3. Please execute these codes in Python, comment the codes and upload the .pdf file on Moodle for evaluation.

Q1. Write a Python program that calculates the area of a circle given its radius.

Q2. Given a list [8, 2, 9, 4, 6], write a Python program to reverse the list without using any built-in functions.

Q3. Write a Python code to find whether a number is prime or not.

Q4. Write a Python program to calculate the factorial of a given number using a function. (Without recursion)

Q5. Explain the concept of lambda functions in Python. Provide a code as an example using a lambda function.

Q6
a. Explain three features of Python that make it suitable for AI development.
b. Explain the role of the NumPy library in Python. Provide an example of creating and performing operations on a NumPy array.