

BIRCHWOOD UNIVERSITY

Final 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.

For this test, please download any dataset of your choice in .csv format. You can download datasets from Kaggle.

Q1. Given a dictionary {'name': 'Tom', 'age': 15, 'city': 'Chicago'}, write a Python program to print all the keys and values.

Q2. Write a Python program to create a Pandas DataFrame and perform 3 data manipulation operations. (Use the dataset that you have downloaded)

Q3. Explain the purpose of “try”, “except” and “finally”. Write a Python program that copies the contents of one file to another while handling exceptions.

Q4. Write a Python code to demonstrate the use of Strings and any 3 string functions.

Q5. Write a Python program using NumPy to create a 3x3 matrix with values ranging from 1 to 9. Print the matrix and calculate its transpose.

Q6

- a. Discuss the importance of data visualization. Use Matplotlib to plot a simple line graph and a pie chart. (Use the dataset that you have downloaded)
- b. Explain the purpose of Seaborn in data visualization. Create a histogram using Seaborn library.