University of Rajshahi
Department of Computer Science and Engineering

Assignment-1

Implement a simple deep neural network (DNN) for solving the polynomial $y = 5x^3 - 8x^2 - 7x + 1$ with the following specifications: 6

a) Use three hidden-layers of sizes 32, 64, and 128 and display the generated DNN with the required number of parameters.
b) Generate training samples within the range of -20 to +20. Use the appropriate method for normalizing the training data in the range of -1 to +1.
c) Use 5% of the samples as test data and 5% of the samples as validation data and the rest of the data for training the DNN with and appropriate number of epochs.
d) Display the training accuracy vs validation accuracy and training error vs validation error curves.
e) After training, use the test data for prediction and display the prediction accuracy vs true levels of the test data.