# Weekly Test 4 – Units 4 & 5 – Solutions

Answer to Q1 (2 Marks):

Pie charts clearly display the proportion of each category relative to the whole when there are few categories and significant differences.

Answer to Q2 (3 Marks):

Select the first range, hold Ctrl and select additional ranges, then choose Insert > Charts and select the desired chart type.

Answer to Q3 (6 Marks):

import matplotlib.pyplot as plt  
# Bar chart data  
categories = ['A','B','C']  
values = [5, 7, 3]  
plt.figure()  
plt.bar(categories, values)  
plt.title('Bar Chart')  
plt.xlabel('Category')  
plt.ylabel('Value')  
plt.show()  
# Histogram data  
data = [1,2,2,3,3,3,4,4,5]  
plt.figure()  
plt.hist(data, bins=5)  
plt.title('Histogram')  
plt.xlabel('Value')  
plt.ylabel('Frequency')  
plt.show()

This code imports Matplotlib, defines data, creates a bar chart with labels and titles, then creates a histogram with five bins and labels.

Answer to Q4 (3 Marks):

Add descriptive axis titles and a chart title; enable data labels for exact values; choose contrasting colours and remove unnecessary gridlines.

Answer to Q5 (6 Marks):

Call plt.figure(figsize=(width, height)); plot the data; set axis labels with plt.xlabel() and plt.ylabel(); add a title with plt.title(); and save the figure using plt.savefig(‘filename.png’, dpi=300) before displaying it.