# Weekly Test 1 – Unit 1 – Solutions

Answer to Q1 (2 Marks):

Data analytics is the practice of examining raw data to extract meaningful patterns and insights. It combines statistical and computational techniques to turn data into information that supports decision‑making.

Answer to Q2 (3 Marks):

Descriptive analytics summarises historical data; diagnostic analytics explores why events happened; predictive analytics forecasts future outcomes; prescriptive analytics recommends actions based on predictions.

Answer to Q3 (6 Marks):

A typical life cycle involves defining the problem, collecting data, cleaning and preparing data, analysing data using models or statistical methods, visualising the results, and deploying insights to drive decisions. A diagram can illustrate these sequential steps.

Answer to Q4 (3 Marks):

Sampling is selecting a subset from a population to make inferences about the whole. The central limit theorem states that, for large sample sizes, the distribution of sample means tends to be normal regardless of the population distribution.

Answer to Q5 (6 Marks):

Mean = (4+6+6+7+8+10)/6 = 6.83; median = (6+7)/2 = 6.5; mode = 6; range = 6; the values are concentrated around 6–8 with a small spread of 6 units.