## Rubric: Assignment 1 – Introduction and Wrangling

| Question / Criteria | Points | Expectations for Full Credit | Score |
|---|---|---|---|
| Q1. Package Installation | 1.0 | • Correctly states that install.packages() requires a string.<br>• Explains clearly that R needs the package name as text, not an object. | |
| Q2. Vector Data Type | 1.0 | • Creates vector with numeric, character, and logical values.<br>• Correctly identifies type coercion (character).<br>• Explains why coercion happens. | |
| Q3a. Fruit Data Frame | 0.5 | • Creates 5×3 table with fruit names as rows and variables colour, shape, taste.<br>• Fills out values appropriately. | |
| Q3b. Mean Taste Rank | 0.5 | • Correctly calculates mean of "taste" column.<br>• Reports result clearly. | |
| Q3c. middle_mean Function | 0.75 | • Defines valid function.<br>• Removes largest and smallest values.<br>• Correctly returns mean of remaining values and applies function. | |
| Q4a. Subset Tumours | 0.5 | • Correctly subsets by radius_mean < 20.<br>• Saves new object as large_tumour. | |
| Q4b. Reshape to Long Format | 0.5 | • Selects variables (id, diagnosis, radius_mean, texture_mean, smoothness_mean, compactness_mean).<br>• Reshapes into 4-column long format object. | |
| Q4c. Summary Statistics | 0.5 | • Groups by diagnosis and variable.<br>• Computes mean, median, max, min, SD, and count.<br>• Output stored as summary table. | |
| Q4d. Largest & Smallest Radii | 0.75 | • Identifies 5 patients with largest radius_mean and their diagnoses.<br>• Identifies 5 patients with smallest radius_mean and their diagnoses.<br>• Provides a reasonable interpretation of the trend. | |
| Total | 6.0 | | |