# DT228/1 Algorithms Marking Sheet

### Part 1 - Sorting

| 1 | Disc  | cussion of algorithms considered (9%)   |    |
|---|-------|---|----|
|   | (i)   | Discussion of at least 2 algorithms for merging (problem size, complexity, order) | 4  |
|   | (ii)  | Discussion of at least 2 algorithms for sorting (problem size, complexity, order) | 4  |
|   | (iii) | Chosen algorithms   | 1  |
| 2 | Disc  | cussion of datastructures considered (6%)   |    |
|   | (i)   | Discussion of two data structures   | 2  |
|   | (ii)  | Examples of what your data looks like in these data structures                    | 4  |
| 3 | Des   | cription of solution (15%)  |    |
|   | (i)   | Ground rules  | 1  |
|   | (ii)  | How algorithms work together & complexity   | 4  |
|   | (iii) | Reference to other sources (books, journals, papers)                              | 1  |
|   | (iv)  | Step-by-step description  | 9  |
| 4 | Act   | ual Algorithm (10%)   |    |
|   | (i)   | Pseudocode  | 4  |
|   | (ii)  | Flowchart   | 4  |
|   | (iii) | Are they matching?  | 2  |
|   |       |   | 40 |

#### Part 2 - Searching

| 1   | 1 Discussion of searching algorithm 1 (8%) |  |    |  |
|---|--|--|----|--|
|   | (i)  | Ground rules                                 | 1  |  |
|   | (ii)                                       | How algorithm(s) work, stepwise & complexity | 7  |  |
| 2 Discussion of searching algorithm 2 (12%) |  |  |    |  |
|   | (i)  | Ground rules                                 | 1  |  |
|   | (ii)                                       | How algorithm(s) work, stepwise & complexity | 7  |  |
|   | (iii)                                      | Which is best of 1 & 2 and why.              | 4  |  |
| 3   | 3 Actual Algorithm (10%)                   |  |    |  |
|   | (i)  | Pseudocode                                   | 4  |  |
|   | (ii)                                       | Flowchart                                    | 4  |  |
|   | (iii)                                      | Are they matching?                           | 2  |  |
|   |  |  | 30 |  |

## Part 3 - Implementation

| 1 | 1 Implementation of Part 1 algorithm (10%) |                          |    |
|---|--|--------------------------|----|
|   | (i)  | Does it match algorithm? | 8  |
|   | (ii)                                       | Code & exe               | 2  |
| 2 | lementation of Part 2 algorithm (10%)      |                          |    |
|   | (i)  | Does it match algorithm? | 8  |
|   | (ii)                                       | Code & exe               | 2  |
|   |  |                          | 20 |

#### Part 4 - Demo

| 1 | 1 Demo of Part 1 algorithm (5%) |               |    |  |  |
|---|---------------------------------|---------------|----|--|--|
|   | (i)                             | Does it work? | 5  |  |  |
| 2 | 2 Demo of Part 2 algorithm (5%) |               |    |  |  |
|   | (i)                             | Does it work? | 5  |  |  |
|   |                                 |               | 10 |  |  |