Bài 1

Selection Sort

2, 1, 10, 6, 3, 8, 7, 13, 20

1, 2, 10, 6, 3, 8, 7, 13, 20

1, 2, 3, 6, 10, 8, 7, 13, 20

1, 2, 3, 6, 10, 8, 7, 13, 20

1, 2, 3, 6, 7, 8, 10, 13, 20

Insertion Sort

2, 1, 10, 6, 3, 8, 7, 13, 20

1, 2, 10, 6, 3, 8, 7, 13, 20

1, 2, 10, 6, 3, 8, 7, 13, 20

1, 2, 6, 10, 3, 8, 7, 13, 20

1, 2, 3, 6, 10, 8, 7, 13, 20

1, 2, 3, 6, 8, 10, 7, 13, 20

1, 2, 3, 6, 7, 8, 10, 13, 20

1, 2, 3, 6, 7, 8, 10, 13, 20

1, 2, 3, 6, 7, 8, 10, 13, 20

Bubble Sort

2, 1, 10, 6, 3, 8, 7, 13, 20

First pass Second pass

1, 2, 10, 6, 3, 8, 7, 13, 20 1, 2, 3, 6, 8, 7, 10, 13, 20

1, 2, 10, 6, 3, 8, 7, 13, 20 1, 2, 3, 6, 7, 8, 10, 13, 20

1, 2, 6, 10, 3, 8, 7, 13, 20

1, 2, 6, 10, 3, 8, 7, 13, 20

1, 2, 6, 3, 10, 8, 7, 13, 20

1, 2, 6, 3, 8, 10, 7, 13, 20

1, 2, 6, 3, 8, 7, 10, 13, 20

Merge Sort

2, 1, 10, 6, 3, 8, 7, 13, 20

2, 1, 10, 6 3, 8, 7, 13, 20

2, 1 10, 6 3, 8 7, 13, 20

2 1 10 6 3 8 7 13, 20

2 1 10 6 3 8 7 13 20

1, 2 6, 10 3 7, 8 13, 20

1, 2, 6, 10 3, 7, 8 13, 20

1, 2, 6, 10 3, 7, 8, 13, 20

1, 2, 3, 6, 7, 8, 10, 13, 20

Quick Sort

2, 1, 10, 6, 3, 8, 7, 13, 20

2, 1, 6, 3 7 10, 8, 13, 20

2, 1, 3 6 7 10, 8 13 20

1 2, 3 6 7 8 10 13 20

Bài 2

Câu 1

Selection Sort

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Insertion Sort

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Bubble Sort

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

First pass

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Merge Sort

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5 6, 7, 8, 9, 10

1, 2 3, 4, 5 6, 7 8, 9, 10

1 2 3 4, 5 6 7 8 9, 10

1 2 3 4 5 6 7 8 9 10

1 2 3 4, 5 6 7 8 9, 10

1, 2 3, 4, 5 6, 7 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Quick Sort

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Câu 2

Selection Sort

10, 9, 8, 7, 6, 5, 4, 3, 2, 1

1, 9, 8, 7, 6, 5, 4, 3, 2, 10

1, 2, 8, 7, 6, 5, 4, 3, 9, 10

1, 2, 3, 7, 6, 5, 4, 8, 9, 10

1, 2, 3, 4, 6, 5, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Insertion Sort

10, 9, 8, 7, 6, 5, 4, 3, 2, 1

9, 10, 8, 7, 6, 5, 4, 3, 2, 1

8, 9, 10, 7, 6, 5, 4, 3, 2, 1

7, 8, 9, 10, 6, 5, 4, 3, 2, 1

6, 7, 8, 9, 10, 5, 4, 3, 2, 1

5, 6, 7, 8, 9, 10, 4, 3, 2, 1

4, 5, 6, 7, 8, 9, 10, 3, 2, 1

3, 4, 5, 6, 7, 8, 9, 10, 2, 1

2, 3, 4, 5, 6, 7, 8, 9, 10, 1

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Bubble Sort

10, 9, 8, 7, 6, 5, 4, 3, 2, 1

First pass

9, 10, 8, 7, 6, 5, 4, 3, 2, 1

9, 8, 10, 7, 6, 5, 4, 3, 2, 1

9, 8, 7, 10, 6, 5, 4, 3, 2, 1

9, 8, 7, 6, 10, 5, 4, 3, 2, 1

9, 8, 7, 6, 5, 10, 4, 3, 2, 1

9, 8, 7, 6, 5, 4, 10, 3, 2, 1

9, 8, 7, 6, 5, 4, 3, 10, 2, 1

9, 8, 7, 6, 5, 4, 3, 2, 10, 1

9, 8, 7, 6, 5, 4, 3, 2, 1, 10

Second pass

8, 9, 7, 6, 5, 4, 3, 2, 1, 10

8, 7, 9, 6, 5, 4, 3, 2, 1, 10

8, 7, 6, 9, 5, 4, 3, 2, 1, 10

8, 7, 6, 5, 9, 4, 3, 2, 1, 10

8, 7, 6, 5, 4, 9, 3, 2, 1, 10

8, 7, 6, 5, 4, 3, 9, 2, 1, 10

8, 7, 6, 5, 4, 3, 2, 9, 1, 10

8, 7, 6, 5, 4, 3, 2, 1, 9, 10

Third pass

7, 8, 6, 5, 4, 3, 2, 1, 9, 10

7, 6, 8, 5, 4, 3, 2, 1, 9, 10

7, 6, 5, 8, 4, 3, 2, 1, 9, 10

7, 6, 5, 4, 8, 3, 2, 1, 9, 10

7, 6, 5, 4, 3, 8, 2, 1, 9, 10

7, 6, 5, 4, 3, 2, 8, 1, 9, 10

7, 6, 5, 4, 3, 2, 1, 8, 9, 10

Fourth pass

6, 7, 5, 4, 3, 2, 1, 8, 9, 10

6, 5, 7, 4, 3, 2, 1, 8, 9, 10

6, 5, 4, 7, 3, 2, 1, 8, 9, 10

6, 5, 4, 3, 7, 2, 1, 8, 9, 10

6, 5, 4, 3, 2, 7, 1, 8, 9, 10

6, 5, 4, 3, 2, 1, 7, 8, 9, 10

Fifth pass

5, 6, 4, 3, 2, 1, 7, 8, 9, 10

5, 4, 6, 3, 2, 1, 7, 8, 9, 10

5, 4, 3, 6, 2, 1, 7, 8, 9, 10

5, 4, 3, 2, 6, 1, 7, 8, 9, 10

5, 4, 3, 2, 1, 6, 7, 8, 9, 10

Sixth pass

4, 5, 3, 2, 1, 6, 7, 8, 9, 10

4, 3, 5, 2, 1, 6, 7, 8, 9, 10

4, 3, 2, 5, 1, 6, 7, 8, 9, 10

4, 3, 2, 1, 5, 6, 7, 8, 9, 10

3, 4, 2, 1, 5, 6, 7, 8, 9, 10

3, 2, 4, 1, 5, 6, 7, 8, 9, 10

3, 2, 1, 4, 5, 6, 7, 8, 9, 10

Seventh pass

2, 3, 1, 4, 5, 6, 7, 8, 9, 10

2, 1, 3, 4, 5, 6, 7, 8, 9, 10

Eighth pass

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Merge Sort

10, 9, 8, 7, 6, 5, 4, 3, 2, 1

10, 9, 8, 7, 6 5, 4, 3, 2, 1

10, 9 8, 7, 6 5, 4 3, 2, 1

10 9 8 7, 6 5 4 3 2, 1

10 9 8 7 6 5 4 3 2 1

9, 10 8 6, 7 4, 5 3 1, 2

9, 10 6, 7, 8 4, 5 1, 2, 3

6, 7, 8, 9, 10 1, 2, 3, 4, 5

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Quick Sort

10, 9, 8, 7, 6, 5, 4, 3, 2, 1

1 10, 9, 8, 7, 6, 5, 4, 3, 2

1 2 10, 9, 8, 7, 6, 5, 4, 3

1 2 3 10, 9, 8, 7, 6, 5, 4

1 2 3 4 10, 9, 8, 7, 6, 5

1 2 3 4 5 10, 9, 8, 7, 6

1 2 3 4 5 6 10, 9, 8, 7

1 2 3 4 5 6 7 10, 9, 8

1 2 3 4 5 6 7 8 10, 9

1 2 3 4 5 6 7 8 9 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Câu 3

Selection Sort

9, 10, 1, 2, 3, 4, 5, 6, 7, 8

1, 10, 9, 2, 3, 4, 5, 6, 7, 8

1, 2, 9, 10, 3, 4, 5, 6, 7, 8

1, 2, 3, 10, 9, 4, 5, 6, 7, 8

1, 2, 3, 4, 9, 10, 5, 6, 7, 8

1, 2, 3, 4, 5, 10, 9, 6, 7, 8

1, 2, 3, 4, 5, 6, 9, 10, 7, 8

1, 2, 3, 4, 5, 6, 7, 10, 9, 8

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Insertion Sort

9, 10, 1, 2, 3, 4, 5, 6, 7, 8

1, 9, 10, 2, 3, 4, 5, 6, 7, 8

1, 2, 9, 10, 3, 4, 5, 6, 7, 8

1, 2, 9, 10, 3, 4, 5, 6, 7, 8

1, 2, 3, 9, 10, 4, 5, 6, 7, 8

1, 2, 3, 4, 9, 10, 5, 6, 7, 8

1, 2, 3, 4, 5, 9, 10, 6, 7, 8

1, 2, 3, 4, 5, 6, 9, 10, 7, 8

1, 2, 3, 4, 5, 6, 7, 9, 10, 8

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Bubble Sort

9, 10, 1, 2, 3, 4, 5, 6, 7, 8

First pass

9, 1, 10, 2, 3, 4, 5, 6, 7, 8

9, 1, 2, 10, 3, 4, 5, 6, 7, 8

9, 1, 2, 3, 10, 4, 5, 6, 7, 8

9, 1, 2, 3, 4, 10, 5, 6, 7, 8

9, 1, 2, 3, 4, 5, 10, 6, 7, 8

9, 1, 2, 3, 4, 5, 6, 10, 7, 8

9, 1, 2, 3, 4, 5, 6, 7, 10, 8

9, 1, 2, 3, 4, 5, 6, 7, 8, 10

Second pass

1, 9, 2, 3, 4, 5, 6, 7, 8, 10

1, 2, 9, 3, 4, 5, 6, 7, 8, 10

1, 2, 3, 9, 4, 5, 6, 7, 8, 10

1, 2, 3, 4, 9, 5, 6, 7, 8, 10

1, 2, 3, 4, 5, 9, 6, 7, 8, 10

1, 2, 3, 4, 5, 6, 9, 7, 8, 10

1, 2, 3, 4, 5, 6, 7, 9, 8, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Merge Sort

9, 10, 1, 2, 3, 4, 5, 6, 7, 8

9, 10, 1, 2, 3 4, 5, 6, 7, 8

9, 10 1, 2, 3 4, 5 6, 7, 8

9 10 1 2, 3 4 5 6 7, 8

9 10 1 2 3 4 5 6 7 8

9, 10 1 2, 3 4, 5 6 7, 8

9, 10 1, 2, 3 4, 5 6, 7, 8

1, 2, 3, 9, 10 4, 5, 6, 7, 8

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Selection Sort

9, 10, 1, 2, 3, 4, 5, 6, 7, 8

1, 2, 3, 4, 5, 6, 7, 8 9 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Câu 4

3, 4, 5, 6, 7, 8, 9, 10, 1, 2

Selection Sort

3, 4, 5, 6, 7, 8, 9, 10, 1, 2

1, 4, 5, 6, 7, 8, 9, 10, 3, 2

1, 2, 5, 6, 7, 8, 9, 10, 3, 4

1, 2, 3, 6, 7, 8, 9, 10, 5, 4

1, 2, 3, 4, 7, 8, 9, 10, 5, 6

1, 2, 3, 4, 5, 8, 9, 10, 7, 6

1, 2, 3, 4, 5, 6, 9, 10, 7, 8

1, 2, 3, 4, 5, 6, 7, 10, 9, 8

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Insertion Sort

3, 4, 5, 6, 7, 8, 9, 10, 1, 2

1, 3, 4, 5, 6, 7, 8, 9, 10, 2

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Bubble Sort

3, 4, 5, 6, 7, 8, 9, 10, 1, 2

First pass

3, 4, 5, 6, 7, 8, 9, 1, 10, 2

3, 4, 5, 6, 7, 8, 9, 1, 2, 10

Second pass

3, 4, 5, 6, 7, 8, 1, 9, 2, 10

3, 4, 5, 6, 7, 8, 1, 2, 9, 10

Third pass

3, 4, 5, 6, 7, 1, 8, 2, 9, 10

3, 4, 5, 6, 7, 1, 2, 8, 9, 10

Fourth pass

3, 4, 5, 6, 1, 7, 2, 8, 9, 10

3, 4, 5, 6, 1, 2, 7, 8, 9, 10

Fifth pass

3, 4, 5, 1, 6, 2, 7, 8, 9, 10

3, 4, 5, 1, 2, 6, 7, 8, 9, 10

Sixth pass

3, 4, 1, 5, 2, 6, 7, 8, 9, 10

3, 4, 1, 2, 5, 6, 7, 8, 9, 10

Seventh pass

3, 1, 4, 2, 5, 6, 7, 8, 9, 10

3, 1, 2, 4, 5, 6, 7, 8, 9, 10

Eighth pass

1, 3, 2, 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Merge Sort

3, 4, 5, 6, 7, 8, 9, 10, 1, 2

3, 4, 5, 6, 7 8, 9, 10, 1, 2

3, 4 5, 6, 7 8, 9 10, 1, 2

3 4 5 6, 7 8 9 10 1, 2

3 4 5 6 7 8 9 10 1 2

3, 4 5 6, 7 8, 9 10 1, 2

3, 4 5, 6, 7 8, 9 1, 2, 10

3, 4, 5, 6, 7 1, 2, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Quick Sort

3, 4, 5, 6, 7, 8, 9, 10, 1, 2

1, 2 3 4, 5, 6, 7, 8, 9, 10

1, 2, 3, 4, 5, 6, 7, 8, 9, 10