

### IDMSQAS02

– Which is the prefix notation of the following infix expression:  $5 + (7 + 9 * 3) * (2 + 8)$ ?

Select one:

- ☐ 5 7 9 3 2 8 \* + + \* +
- ☐ 5 7 9 3 \* + 2 8 + \* +
- ☒ + 5 \* + 7 \* 9 3 + 2 8
- ☐ + \* + \* + 5 7 9 3 2 8

### IDMSQAS03

– Evaluate the following expression:  $87 + 64 + * 237 + * - 1 - ?$

Select one:

- ☐ 129
- ☐ 192
- ☐ 219
- ☒ 291

### IDMSQAS05

– Method F below takes a number n as an argument, and use a stack s to do processing. What does the method do in general?

```
public void F(int n)
{
    Stack s = new Stack();
    while (n > 0)
    {
        s.push(n % 2);
        n = n / 2;
    }
    while (!s.isEmpty())
        System.out.print(s.pop());
}
```

Select one:

- ☒ Print binary representation of n in reverse order.

- ☐ Print binary representation of n.
- ☐ Print all positive even number that is smaller than n.
- ☒ Print all positive even number that is smaller than n in reverse order.

### IDMSQAS06

– In the following list of number: 8 17 25 35 41 52 60 75 86. How many comparisons would binary search take to find 52?

Select one:

- ☐ 2
- ☒ 4
- ☐ 6
- ☐ 3

### IDMSQAS07

– In the following list of number: 8 17 25 35 41 52 60 75 86. How many comparisons would linear search take to find 52?

Select one:

- ☐ 3
- ☐ 2
- ☒ 4
- ☐ 6

### IDMSQAS08

– The keys 12, 18, 13, 2, 3, 23, 15 and 5 are inserted into an initially empty hash table of length 10 using close hashing with hash function:  $h(k)=k \bmod 10$  and linear probing. What is the resultant hash table?

0	
1	
2	12
3	3
4	2
5	5
6	15
7	13
8	18
9	23
<b>A</b>	

0	
1	
2	12
3	13
4	2
5	3
6	23
7	15
8	18
9	5
<b>B</b>	

0	
1	
2	2
3	3
4	
5	5
6	
7	
8	18
9	
<b>C</b>	

0	2
1	3
2	12
3	13
4	23
5	5
6	15
7	
8	18
9	
<b>D</b>	

Select one:

- ☐ C  
☐ D  
☒ B  
☐ A

IDMSQAS09

– The keys 12, 18, 13, 2, 3, 23, 15 and 5 are inserted into an initially empty hash table of length 10 using open hashing with hash function:  $h(k)=k \bmod 10$  and separate chaining. What is the resultant hash table?

0	
1	
2	12 -> 2
3	13 -> 3 -> 23
4	
5	15 -> 5
6	
7	
8	18
9	
<b>A</b>	

0	
1	
2	12
3	13
4	2
5	3
6	23
7	15
8	18
9	5
<b>B</b>	

0	
1	
2	2
3	3
4	12
5	5
6	13
7	23
8	18
9	15
<b>C</b>	

0	
1	
2	2 -> 12
3	23 -> 3 -> 13
4	
5	5 -> 15
6	
7	
8	18
9	
<b>D</b>	

Select one:

- ☐ B  
☒ D  
☐ C

☐ A

### IDMSQAS10

– Consider a hash table of size seven, with starting index zero, and a hash function:  $h(k) = (3k+4) \bmod 7$ . Assuming the hash table is initially empty, which of the following is the contents of the table when the sequence 1, 3, 8, 10 is inserted into the table using close hasing with linear probing? Note that ‘-’ denotes an empty location in the table.

Select one:

☐ 8, -, -, -, -, -, 10

☐ 1, -, -, -, -, -, 3

☐ 1, 10, 8, -, -, -, 3

☒ 1, 8, 10, -, -, -, 3

### IDMSQAS11

– A characteristic of the data that binary search uses but linear search ignores is the?

Select one:

☐ Maximum and minimum value of the list.

☐ Type of the list.

☒ Order of the elements of the list.

☐ Length of the list.