INSTRUCTIONS TO CANDIDATES
1. This Answer Booklet consists of TEN (10) printed pages.
2. Fill in your Matriculation Number clearly below and at the top of pages 3, 5, 7 and 9.
3. The last blank page (page 10) may be used if you need more space to write your answers.
4. You may write your answers in pencil.

MATRICULATION NO.: [Space for Matriculation Number]
(Write your Matriculation Number above legibly with a pen.)

<table>
<thead>
<tr>
<th>Section/Questions</th>
<th>Possible</th>
<th>Marks</th>
<th>Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. MCQs 1 – 6</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Q 7</td>
<td>8</td>
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<td>B. Q 8</td>
<td>12</td>
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<td>B. Q 9</td>
<td>12</td>
<td></td>
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</tr>
<tr>
<td>B. Q 10</td>
<td>10</td>
<td></td>
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</tr>
<tr>
<td>B. Q 11</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Q 12</td>
<td>10</td>
<td></td>
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<tr>
<td>B. Q 13</td>
<td>15</td>
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<tr>
<td>B. Q 14</td>
<td>6</td>
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<td>Total</td>
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</tbody>
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Q7. [8 marks]

```java
public boolean searchAndSwitch(E item) {
    ListNode <E> curr = head;
    ListNode <E> prev = null;
    while (curr != null && !curr.getElement().equals(item)) {
        prev = curr;
        curr = curr.getNext();
    }
    // Write your code only inside the dashed box below

    return true;
}
```
Q8. [12 marks]

```java
public ArrayList<MyPolygon> triangulate() {
    ArrayList<MyPolygon> triangles;
    return triangles;
}
```
Q9. (continued...) [12 marks]
Q11. [9 marks]

(A) Improved Bubble Sort
   Number of passes =
   Number of comparisons =

(B) Selection Sort
   Number of passes =
   Number of comparisons =

(C) Insertion Sort
   Number of passes =
   Number of comparisons =

Q12. [10 marks]
Q13. [15 marks]

(A) (i) Sequence for inserting the keys:

[3 marks]

(ii) Keys involved in this insertion:

[3 marks]

(iii) Probe sequence:

[3 marks]

(B) (i) Separate chaining:

[2 marks]

(ii) Quadratic probing:

[2 marks]

(iii) 

[2 marks]
Q14. [6 marks]

Matriculation no.: