<table>
<thead>
<tr>
<th>Question</th>
<th>Points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24/20</td>
<td>+4 points: including information about what each green wall layer does</td>
</tr>
<tr>
<td>2</td>
<td>24/20</td>
<td>+4 points: For additional info for question 2b.</td>
</tr>
<tr>
<td>3</td>
<td>24/20</td>
<td>+4 points: For citing the information in both D&amp;B and Orbis for question 3</td>
</tr>
</tbody>
</table>
| 4        | 18/20  | -2 points: Missing some of the article authors. Your article citation looks good, but make sure you include all authors when citing your journal articles! :)
| 5        | 20/20  |       |

**Extra Credit:**

**Missed Points:**

**Final Score:** 110

**Additional Comments:**
1. Your dorm is interested in improving the environment around campus and are proposing building a green wall, which will improve the look of your dorm aesthetically while also lowering your energy consumption and greenhouse gas emissions. As part of your proposal, you need to review some handbooks to determine what are the four layers that make up a green wall?

Vegetation Layer (climbing plants or low height vegetation), Substrate Layer (structural integration determines geometry, also pots can be used), Insulation Layers (water and or thermal insulation layer), and Structural layer (green walls are classified by structures and relationship to building)

Citation:

It would be helpful to get some statistics on the size of the global market for automotive sensor technologies.

a. How large is the projected global market for automobile sensors supposed to be in 2025?

The global market for automobile sensors is projected to grow to $78.9 billion by 2025.

Citation:

b. Which application had the largest market share in 2019?

Powertrain ($15,070 Millions)

Citation:

<table>
<thead>
<tr>
<th>Application</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>CAGR% 2021-2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powertrain</td>
<td>15,070</td>
<td>9,755</td>
<td>15,090</td>
<td>24,785</td>
<td>89,000</td>
<td>10.4</td>
</tr>
<tr>
<td>Driver support, comfort and convenience</td>
<td>7,020</td>
<td>4,540</td>
<td>7,275</td>
<td>17,580</td>
<td>49,250</td>
<td>19.3</td>
</tr>
<tr>
<td>Vehicle safety and security</td>
<td>6,360</td>
<td>4,115</td>
<td>7,880</td>
<td>16,870</td>
<td>40,000</td>
<td>16.2</td>
</tr>
<tr>
<td>Vehicle control</td>
<td>8,540</td>
<td>5,530</td>
<td>8,750</td>
<td>14,675</td>
<td>34,250</td>
<td>10.9</td>
</tr>
<tr>
<td>Others</td>
<td>2,980</td>
<td>1,935</td>
<td>3,080</td>
<td>5,230</td>
<td>12,000</td>
<td>11.2</td>
</tr>
<tr>
<td>Total</td>
<td>39,570</td>
<td>25,875</td>
<td>42,075</td>
<td>78,540</td>
<td>180,000</td>
<td>13.4</td>
</tr>
</tbody>
</table>
2. You need to find a partner to help develop and commercialize (hopefully) your new product idea for a fingerprint sensor. An industry expert has suggested to you that Fingerprint Cards AB might be a potential partner. Before contacting them, learn more about Fingerprint Cards AB. Uncover the following facts about the company’s operations:
   a. The year when the company was founded or incorporated (or changed ownership)
      i. 1971 D&B - founded
      ii. 1990 Orbis - incorporated
   b. The address of their headquarters
      i. Kungsgatan 20, Göteborg, Västra Götaland, 411 19, Sweden
         1. From D&B and their website
      ii. Kungsportsplatsen 2, 411 10 Göteborg, Sweden
         1. From Orbis
   c. Total number of employees worldwide (i.e., all sites, if possible)
      i. 50 total employees on D&B
      ii. 240 employees in HQ on Orbis
   d. Latest revenue (sales) figures
      i. Actual revenue 136M - D&B
      ii. Operating revenue (turnover) 154M - Orbis
   e. What is the US 8-Digit SIC (Standard Industrial Classification) code for their primary industry?
      i. 36790000 - D&B
   f. Citations:
      i. D&B Hoovers, https://app.avention.com/ (Fingerprint Cards AB, first result for HQ; accessed Sept 15, 2021)
      ii. Orbis, https://orbis.bvdinfo.com/ (Fingerprint Cards AB, first result; accessed Sept 15, 2021)

4. You would like to learn more about baking brownies, and you know that the right book can provide a good summary on this topic. Use the resources found on the 2.009 Guide (https://libguides.mit.edu/2-009) to answer the following questions:
   a) Find a general book on baking brownies, available in the MIT Libraries. Provide a good citation for the book, including the library call # at the end of the citation and which library has the item (Dewey, Rotch, Barker, etc.) or if it is an eBook.

   Baking with Mary Berry
   Citation:
b). To find more specific information, you want to read a scholarly article on the narrower topic of effect of cocoa butter on physical properties of chocolate.
   1. Use a database to search for an English language journal article on this topic published in 2010-2021. Provide a good citation for the article, and include the bibliographic database you used to find the citation.
      "Physical Chemical Properties of Shea/Cocoa Butter Blends and their Potential for Chocolate Manufacture"
      Database: Compendex/Inspec

2. MIT no longer has a print subscription to this journal. They used to have a print subscription from 1947-2007. However this article is available online. MIT has had an online subscription to this journal since 1996 till the present.

5. You want to make sure your design or project idea is unique before you take it to a company or customer for production. Check the patent literature, and find one granted (not an application) United States utility patent for a fiber optic sensor.
   a) What is the patent title? Fiber optic electromagnetic phenomena sensors
   b) What is the patent number? US9823277 B1
   c) Who is the assignee? The inventor? Assignee: Fiber Optic Sensor Systems Technology Corporation, Inventor: Lagakos, Nicholas
d) **Provide at least one classification code assigned to this patent.** G01R 19/0092 - measuring current only

e) **Where did you find this patent/what database did you use?** This patent was found using PatentScout.

Citation: