Student Worksheet on FTIR Interpretation

Date: 

Name: Connor Mulvey
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Sample ID: Volta
Name of the chemical compound: Diphenyl carbonate

Draw the chemical structure below:

\[
\text{Chemical Structure Image}
\]

Write down the IR peak wavenumbers, their corresponding functional group and bond vibrations. In particular, the characteristic bond vibrations are used for the identification of compounds in the laboratory.

<table>
<thead>
<tr>
<th>IR absorption (wave number, cm(^{-1}))</th>
<th>Functional Group</th>
<th>Types of bond vibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1740</td>
<td>C = O</td>
<td>Stretch</td>
</tr>
<tr>
<td>1096, 1381</td>
<td>C-O</td>
<td>Bond</td>
</tr>
<tr>
<td>2984, 2912</td>
<td>C-H</td>
<td>SP3 Stretch</td>
</tr>
</tbody>
</table>

Please write it clearly and legibly with black ink pen or pencil.
Name of chemical compound: Diethyl Carbonate
Sample Id: Dolla

Sun Jul 24 20:27:31 2016 (GMT-05:00)

FIND PEAKS:
Spectrum: Sun Jul 24 20:27:31 2016 (GMT-05:00)
Region: 4000.19 525.03
Absolute threshold: 97.978
Sensitivity: 68

Position: 769.82 783.58 900.93 981.67 1016.83 1092.00 1116.08 1177.05
Intensity: 41.956 47.982 84.458 74.378 18.762 67.458 82.068 77.790