Use the magnetic brake assembly working drawing set to complete the questions below. Where indicated, show your work on another sheet of paper.

1) How many pieces are required to complete this assembly? _____________________________

2) What units are used in this drawing set? _____________________________

3) What is the material of part 1? _____________________________

4) What is the scale of the drawing of the drag ring? _____________________________

5) What type of section view is Section B-B? _____________________________

6) What type of section view is shown on sheet 4? _____________________________

7) How many wires are grouped together in the wire coil? _____________________________

8) Which component is inserted first into the brake housing, part 2 or part 4? _____________________________

9) Which part uses a scale that is different from that shown in the title block? _____________________________

10) What is the cross-sectional width of the wire coil? (Please show work.) _____________________________

11) How many fins does the impeller have? _____________________________

12) What is the angle between each fin? (Hint: Assume angle is measured from center to center.) ___________________________________________

13) How are different materials represented in Section A-A? _____________________________

14) Which of the following should be assembled first?

   A. Part 4 with Part 1
   B. Part 5 with Part 1
   C. Part 2 with Part 1

15) What is the width of the circular channel in the base of the impeller? (Please show work.) ___________________________________________

NOTE: Questions 16 – 17 are on the next page!
16) What is the value of the labelled dimension?
   A. _____________________
   B. _____________________
   C. _____________________

17) What is the value of the labelled dimension?
   A. _____________________
   B. _____________________
   C. _____________________
   D. _____________________
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>QTY.</th>
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<tbody>
<tr>
<td>1</td>
<td>Magnetic Brake Housing</td>
<td>Aluminum 1060 Alloy</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Wire Coil</td>
<td>Copper</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Bushings</td>
<td>Aluminum Bronze</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Drag Ring</td>
<td>Alloy Steel</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Impeller</td>
<td>Ductile Iron</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Shaft</td>
<td>TIMETAL 35A CP Titanium (ASTM Grade 1) 99.1 Ti</td>
<td>1</td>
</tr>
</tbody>
</table>
PART CREATED USING REVOLVED CROSS-SECTION;
ASSUME SYMMETRY ABOUT AXIS OF REVOLUTION.
ALL CHAMFERS ARE 45 DEGREES.
NOTE: ALL CHAMFERS ARE 45 DEGREES.