Apprenticeship

Phase Grade Calculator

Explanatory Document
Introduction

The function of this document is to provide an explanation on how the Phase Grade calculators work. The document deals only with the following crafts:

- Carpentry and Joinery - Phase 2
- Electrical - Phase 2
- Heavy Vehicle Mechanics - Phase 2
- Metal Fabrication - Phase 2
- Plumbing - Phase 2

The calculator works in a very simple and straightforward way. The apprentice inputs their assessment grade for each task completed into the box provided by the calculator. The calculator then outputs a Phase Grade reading at the bottom. In every case, the inputted grade must not be less than 50% or the calculator will not work. The calculators are intended solely as a guide and as such any result is indicative only. Final results are sent via the post.

General Information

Each craft consists of mandatory assessments which must be completed during Phase 2. The assessment types used for the Phase calculation are:

- Theory Examination
- Practical Examination and
- Skills Demonstration Examination

The number of assessments of each type will vary depending on the craft. Each assessment type is assigned a weighting for the craft as shown in Table 2. (Phase 3-7 have similar weighting models).

Table 1 - List of mandatory assessments for each craft.

<table>
<thead>
<tr>
<th>Carpentry &amp; Joinery</th>
<th>Electrical</th>
<th>Heavy Vehicle Mechanics</th>
<th>Metal Fabrication</th>
<th>Plumbing</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 - Theory</td>
<td>T1 - Theory</td>
<td>T1 - Theory</td>
<td>T1 - Theory</td>
<td>T1 - Theory</td>
</tr>
<tr>
<td>T2 - Theory</td>
<td>T2 - Theory</td>
<td>T2 - Theory</td>
<td>T2 - Theory</td>
<td>T2 - Theory</td>
</tr>
<tr>
<td>P1 - 2nd. Fix Activities</td>
<td>P1 - Domestic Installation</td>
<td>P1 - Battery Maintenance</td>
<td>P1 - Plate and Pipe Fabrication</td>
<td>P1 - Bathroom</td>
</tr>
<tr>
<td>P2 - Joinery</td>
<td>P2 - Industrial Installation</td>
<td>P2 - Engine Components</td>
<td>P2 - Structural Fabrication</td>
<td>P2 - Heating</td>
</tr>
<tr>
<td>P3 - Drawing</td>
<td>P3 - Panel Wiring/Motor Control</td>
<td>P3 - Transmission</td>
<td>P3 - Rail Manufacture</td>
<td>P3 - Manual Arc Weld M5 Pipe</td>
</tr>
<tr>
<td>SD1 - Ph2 Communications</td>
<td>SD1 - Ph2 Communications</td>
<td>SD1 - Ph2 Communications</td>
<td>SD1 - Ph2 Communications</td>
<td>SD1 - Ph2 Communications</td>
</tr>
<tr>
<td>SD2 - Ph2 1st. Fix</td>
<td>SD3 - Ph2 2nd. Fix</td>
<td>SD4 - Ph2 Joinery</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 - The Phase 2 percentage weighting for each of the assessments are as follows:

<table>
<thead>
<tr>
<th>Theory</th>
<th>Practical</th>
<th>Skills Demonstration</th>
<th>Carpentry &amp; Joinery</th>
<th>Electrical</th>
<th>Heavy Vehicle Mechanics</th>
<th>Metal Fabrication</th>
<th>Plumbing</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>10</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>6.5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>11</td>
<td>8</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>
Let's presume the following grades for the purpose of this example:

Let's take an example of any of the crafts, in this case Metal Fabrication.

Table 1 shows that the following assessments apply for Metal Fabrication.

- T1 - Theory
- T2 - Theory
- P1 - Plate and Pipe Fabrication
- P2 - Structural Fabrication
- P3 - Rail Manufacture
- P4 - Drawing
- SD1 - Ph2 Communications

Table 2 shows the following weighting percentages for Metal Fabrication.

- Theory - 5%
- Practical - 10%
- Skills Demonstration - 4%

Let's presume the following grades for the purpose of this example:

- T1 - Theory - 72%
- T2 - Theory - 65%
- P1 - Plate and Pipe Fabrication - 85%
- P2 - Structural Fabrication - 73%
- P3 - Rail Manufacture - 68%
- P4 - Drawing - 82%
- SD1 - Ph2 Communications - 85%

**Step 1 - Calculate an average for each of the assessments as follows:**

- Theory: \( 72 + 65 \) (divide by 2 to obtain average) = 68.50
- Practical: \( 85 + 73 + 68 + 82 \) (divide by 4 to obtain average) = 77
- Skills Demonstration: (only one task here so no averaging required) = 85

**Step 2 - Apply the above averages with its weighting % as follows.**

- 68.50 x 0.05% = 3.43%
- 77 x 0.10% = 7.70%
- 85 x 0.04% = 3.40%

**Step 3 - Get a total for the above percentages:**

- \( 3.43 + 7.70 + 3.40 = 14.53\% \)

**Step 4 - Also get a total for the weighting percentages:**

- 5 + 10 + 4 = 19%

**Step 5 - Phase Result calculated as follows:**

- \((total \ of \ percentages) \ divided \ by \ (total \ of \ weighted \ percentages) \times 100\)

Therefore in this example: 14.53 divided by 19 x 100 = A Phase Result of 76%

**NOTE:** A minimum of a pass grade in the Portfolio must be achieved to pass the phase. It is only at Phase 7 when the accumulative phase result for Portfolio is applied allowing the system to calculate an overall certificate result. The Portfolio contributes up to 15% of the overall grade.