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***THE HASHMITE UNIVERSITY***

***ELECTRICAL ENGINEERING DEPARTMENT***

***ELECTRICAL MACHINES LAP***

*Lab Sheet*

**DC-Shunt Excited Generator**

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| **Group number: Students ID:** |
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| **2** |  |
| **3** |  |
| **4** |  |
| **5** |  |
| **6** |  |
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**DC-Shunt Excited Generator**

**The no-load characteristic**

 Table (6-7)

 Table (6-8)

|  |
| --- |
| 1400rpm |
| Increasing | Decreasing |
|  (V) |  (A) |  (V) |  (A) |
|  | 0 |  | 0 |
|  | 0.1 |  | 0.1 |
|  | 0.2 |  | 0.2 |
|  | 0.3 |  | 0.3 |
|  | 0.4 |  | 0.4 |
|  | 0.5 |  | 0.5 |
|  | 0.6 |  | 0.6 |
|  | 0.7 |  | 0.7 |

|  |
| --- |
| 1200rpm |
| Increasing | Decreasing |
|  (V) |  (A) |  (V) |  (A) |
|  | 0 |  | 0 |
|  | 0.1 |  | 0.1 |
|  | 0.2 |  | 0.2 |
|  | 0.3 |  | 0.3 |
|  | 0.4 |  | 0.4 |
|  | 0.5 |  | 0.5 |
|  | 0.6 |  | 0.6 |
|  | 0.7 |  | 0.7 |

1. Draw the no load characteristic for increasing and decreasing on (x) axis at 1400 and 1200 rpm on the same graph?

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1. Why does the no load characteristic differ for increasing and decreasing excitation current?

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**The load characteristic**

 Table (6-9)

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| --- | --- | --- | --- |
| **If** (A) | **RPM** | **Il** (A) | **Vt**(V) |
| 0.8 | 1400 | 0  |  |
|  | 1400 | 2 |  |
|  | 1400 | 4 |  |
|  | 1400 | 6 |  |

1. Draw the external voltagecharacteristic separately and shunt excitation in the same diagram with on (x) axis?

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1. Why does **** decrease more with shunt than with separately excitation?

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1. Why does the generator not take up voltage in measurement if the field is wrongly connected?

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**Conclusions:**

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