1. **Capacitor Charging Function 1: Voltage after a given time**

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|  | **Area**  | **Expectation** | **✓ = 1 pt**  |
| 1 | Lay out | Problem clearly laid out in a logical order. Including:1. Flow Chart, 2. Hand test calculations 3. Code 4. Validation
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| 2 | Flow Chart | Flow Chart is used to show Program Steps  |  |
| 3 | Flow Chart is complete & accurate. Properly and clearly formatted  |  |
| 4 | Program Code | Code for a function provided with comments including useful help response, comments listing variables & units, and program logic  |  |
| 5 | .m file included can run |  |
| 6 | Code includes some correct elements  |  |
| 7 | Code logic is largely correct calculations |  |
| 8 | Code is completely correct |  |
| 910 | Validation | Program execution provided showing match to known correct results Includes required test case Includes complete and accurate Table 1.  |  |
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1. **Capacitor Charging Function 2: Time to charge a given voltage**

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|  | **Area**  | **Expectation** | **✓ = 1 pt**  |
| 1 | Worksheet – Set up and Flowchart | Problem clearly laid out using Program Development WorksheetGoal of program presented, Inputs & Outputs for program listed (1-3) |  |
| 2 | Flow Chart is used to show Program Steps (4) |  |
| 3 | Flow Chart is complete & accurate. Properly and clearly formatted (4) |  |
| 4 | Code for a Function Provided with comments including useful help response, comments listing variables & units, and program logic  |  |
| 5 | Program Code | .m file included can run |  |
| 6 | Code includes some correct elements  |  |
| 7 | Code logic is essentially correct |  |
| 8 | Code is completely correct |  |
| 910 | Validation | Program execution provided showing match to known correct results Includes required test case  |  |
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