APPENDIX 1

DATA FOR TWO -AREA, FIVE -MACHINE, EIGHT - BUS TEST SYSTEM

Figure A1.1 Two Area, five- machine, eight-bus test system

Table A1.1  Bus Generation Data for two area, five Machine eight bus system

<table>
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<tr>
<th>Sl. No</th>
<th>Bus No</th>
<th>PG (MW)</th>
<th>QGMAX (MVAR)</th>
<th>QGmin (MVAR)</th>
<th>Voltage Mag.</th>
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<th>$Q_D$ (MVAR)</th>
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Table A1.5  IEEE Type ST1A - Exciter Data for two area, five Machine eight bus system

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Figure A2.1 Ten machine, thirty nine bus New England Test System
Table A2.1 Machine Data for 10 machine 39 bus test system

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<th>$X_q'$</th>
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AVR DATA: $K_A = 25$, $T_A = 0.025$

Table A2.2 Transformer Data for 10 machine 39 bus test system

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Table A2.4 Bus Data for 10 machine 39 bus test system

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APPENDIX 3

DATA FOR SINGLE MACHINE INFINITE BUS SYSTEM

Figure A3.1 One line diagram of a Single Machine Infinite Bus System

Table A3.1 Line Data – SMIB System

Base MVA: 100          Frequency: 50 Hz.

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<th>From Bus</th>
<th>To Bus</th>
<th>No.of Circuits</th>
<th>R (p.u.)</th>
<th>X (p.u.)</th>
<th>B/2 (p.u.)</th>
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Table A3.2 Synchronous Machine Data – SMIB System

Parameters are in p.u. with respect to machine rating

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<th>x_d (p.u.)</th>
<th>x_q (p.u.)</th>
<th>x_d' (p.u.)</th>
<th>x_q' (p.u.)</th>
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<th>T_qo' (s)</th>
<th>H (s)</th>
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Table A3.3 Excitation System Data – SMIB System

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