Universidad Autónoma de Coahuila
Facultad de Ingeniería Mecánica y Eléctrica
Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*14137625*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JESUS EMMANUEL MORALES MENUIOLA***		

Answers

1. (a) $297 + 908j$
   (b) $63.0328 + 22.3607j$
   (c) $6.8276 + 6.069j$
   (d) $1.0265 + 0.503\,87j$

2. $67.5\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (0.100\,85 - 0.238\,88j)\,\text{A}$

       ii. $V_R = (9.076\,83 - 21.4993j)\,\text{V}$

       iii. $V_L = (72.0449 + 30.4167j)\,\text{V}$

       iv. $V_C = (-21.1217 - 8.917\,42j)\,\text{V}$

       v. $P_R = (-4.2204 - 4.3366j)\,\text{W}$

       vi. $P_L = (14.532 - 14.1425j)\,\text{W}$

       vii. $P_C = (-4.2604 + 4.1462j)\,\text{W}$

Answers

1. (a) $-142 - 65j$

   (b) $-26 + 51j$

   (c) $2.4779 + 5.1681j$

   (d) $0.168\,37 + 0.518\,18j$

2. $7.5\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (0.096\,035 - 0.388\,38j)\,\text{A}$

       ii. $V_R = (2.881\,04 - 11.6513j)\,\text{V}$

       iii. $V_L = (58.5656 + 14.4817j)\,\text{V}$

       iv. $V_C = (-11.4466 - 2.830\,45j)\,\text{V}$

       v. $P_R = (-4.2484 - 2.2379j)\,\text{W}$

       vi. $P_L = (11.2487 - 21.3547j)\,\text{W}$

       vii. $P_C = (-2.1985 + 4.1738j)\,\text{W}$

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Subject	Circuit analysis II		Group	5A
Degree	Electrical engineering		Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits		Registration #	*14124427*
Professor's name	Suresh Kumar Gadi		Marks Obtained	_____ /10
Student's name	***JERSON CHAVEZ ORTIZ***			

Answers

1. (a) $-1001 + 664j$

   (b) $-3.494\,118 + 116.2235j$

   (c) $3.0333 + 8.5667j$

   (d) $0.765\,24 + 0.895\,55j$

2. $12.5\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (0.398\,79 - 0.610\,48j)\,\text{A}$

       ii. $V_R = (11.9637 - 18.3144j)\,\text{V}$

       iii. $V_L = (46.0291 + 30.0679j)\,\text{V}$

       iv. $V_C = (-17.9928 - 11.7535j)\,\text{V}$

       v. $P_R = (-6.4096 - 14.6071j)\,\text{W}$

       vi. $P_L = (36.7118 - 16.1091j)\,\text{W}$

       vii. $P_C = (-14.3506 + 6.297\,04j)\,\text{W}$

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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*14156040*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*LUIS ANTNONIO FERNENDEZ CARRASCO*		

Answers

1. (a) $-835 + 88\text{j}$

    (b) $-33.2787 + 64.9344\text{j}$

    (c) $6.4634 + 6.1707\text{j}$

    (d) $0.5686 + 0.906\,01\text{j}$

2. $10\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

    i. $I = (0.082\,454 - 0.275\,05\text{j})\,\text{A}$

    ii. $V_R = (2.4736 - 8.2516\text{j})\,\text{V}$

    iii. $V_L = (51.8465 + 15.5421\text{j})\,\text{V}$

    iv. $V_C = (-24.3202 - 7.2905\text{j})\,\text{V}$

    v. $P_R = (-2.0657 - 1.3608\text{j})\,\text{W}$

    vi. $P_L = (8.549\,87 - 12.9791\text{j})\,\text{W}$

    vii. $P_C = (-4.0106 + 6.0882\text{j})\,\text{W}$

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*14156037*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	***MICHAEL MURILLO MENDEZ***		

Answers

1. (a) $-432 + 432\text{j}$

   (b) $63.6923 + 66.4615\text{j}$

   (c) $4.7765 + 6.4941\text{j}$

   (d) $0.599\,86 + 0.731\,88\text{j}$

2. $8.3333\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

   i. $I = (0.074\,66 - 0.337\,46\text{j})\,\text{A}$

   ii. $V_R = (3.733\,02 - 16.8732\text{j})\,\text{V}$

   iii. $V_L = (89.0549 + 19.7024\text{j})\,\text{V}$

   iv. $V_C = (-12.7879 - 2.829\,19\text{j})\,\text{V}$

   v. $P_R = (-5.4154 - 2.5195\text{j})\,\text{W}$

   vi. $P_L = (13.2978 - 28.5819\text{j})\,\text{W}$

   vii. $P_C = (-1.9095 + 4.1042\text{j})\,\text{W}$

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*11073892*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	***JOSUE AMADOR SIFUENTES***		

Answers

1. (a) $-72 + 368j$

   (b) $56.4 + 27.2j$

   (c) $3.3103 + 4.2759j$

   (d) $0.628\,68 + 0.505\,95j$

2. $26.6667\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (0.100\,98 - 0.200\,73j)\,\mathrm{A}$

       ii. $V_R = (8.078\,73 - 16.0587j)\,\mathrm{V}$

       iii. $V_L = (37.8375 + 19.0351j)\,\mathrm{V}$

       iv. $V_C = (-5.9163 - 2.9763j)\,\mathrm{V}$

       v. $P_R = (-2.4077 - 3.2434j)\,\mathrm{W}$

       vi. $P_L = (7.642 - 5.6731j)\,\mathrm{W}$

       vii. $P_C = (-1.1949 + 0.887\,04j)\,\mathrm{W}$

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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*11268436*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*EDUARDO ZALDIVAR MARTINEZ*		

Answers

1. (a) $-936 + 352\text{j}$

   (b) $-37.169\,23 + 110.9538\text{j}$

   (c) $7.9888 + 4.382\text{j}$

   (d) $0.658\,74 + 0.869\,17\text{j}$

2. $35\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (0.174\,54 - 0.1393\text{j})\,\text{A}$

       ii. $V_R = (12.2178 - 9.750\,96\text{j})\,\text{V}$

       iii. $V_L = (26.2573 + 32.9001\text{j})\,\text{V}$

       iv. $V_C = (-18.4752 - 23.1492\text{j})\,\text{V}$

       v. $P_R = (0.774\,21 - 3.4039\text{j})\,\text{W}$

       vi. $P_L = (9.1659 + 2.0848\text{j})\,\text{W}$

       vii. $P_C = (-6.4493 - 1.4669\text{j})\,\text{W}$

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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*14140390*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	***LUIS DAVID MARENTES REYES***		

Answers

1. (a) $154 + 414j$

   (b) $36.2162 + 15.2973j$

   (c) $6.2941 + 6.8235j$

   (d) $0.80022 + 0.37305j$

2. $11.6667\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (0.10152 - 0.21841j)\,\text{A}$

       ii. $V_R = (7.10639 - 15.289j)\,\text{V}$

       iii. $V_L = (41.1702 + 19.136j)\,\text{V}$

       iv. $V_C = (-8.2766 - 3.847j)\,\text{V}$

       v. $P_R = (-2.6179 - 3.1043j)\,\text{W}$

       vi. $P_L = (8.35919 - 7.0495j)\,\text{W}$

       vii. $P_C = (-1.6805 + 1.4172j)\,\text{W}$

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*12068799*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ $/10$
Student's name	***JESUS ANTONIO ROBLESREYES***		

Answers

1. (a) $-936 + 352\text{j}$

   (b) $-23.3425 + 70.2466\text{j}$

   (c) $4.5 + 7.5\text{j}$

   (d) $0.689\,38 + 0.9132\text{j}$

2. $12.5\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

      i. $I = (0.274\,58 - 0.6883\text{j})\,\text{A}$

      ii. $V_R = (8.237\,31 - 20.6491\text{j})\,\text{V}$

      iii. $V_L = (77.8453 + 31.0539\text{j})\,\text{V}$

      iv. $V_C = (-26.0826 - 10.4048\text{j})\,\text{V}$

      v. $P_R = (-11.9511 - 11.3395\text{j})\,\text{W}$

      vi. $P_L = (42.7491 - 45.0545\text{j})\,\text{W}$

      vii. $P_C = (-14.3234 + 15.0958\text{j})\,\text{W}$

Subject	Circuit analysis II		Group	5A
Degree	Electrical engineering		Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits		Registration #	*14150725*
Professor's name	Suresh Kumar Gadi		Marks Obtained	_____ /10
Student's name	***LILIANA VERA GLZ***			

Answers

1. (a) $-198 + 10j$

   (b) $-9.0566 + 49.6981j$

   (c) $2.5385 + 7.0256j$

   (d) $0.292\,42 + 0.545\,13j$

2. $15\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (1.6437 - 1.4931j)\,\mathrm{A}$

       ii. $V_R = (32.8744 - 29.862j)\,\mathrm{V}$

       iii. $V_L = (225.154 + 247.867j)\,\mathrm{V}$

       iv. $V_C = (-198.0284 - 218.005j)\,\mathrm{V}$

       v. $P_R = (9.449\,34 - 98.1694j)\,\mathrm{W}$

       vi. $P_L = (740.1799 + 71.246\,37j)\,\mathrm{W}$

       vii. $P_C = (-651.0061 - 62.6629j)\,\mathrm{W}$

Answers

1. (a) $-414 - 154\text{j}$

   (b) $-45.76 + 41.32\text{j}$

   (c) $8.646\,02 + 6.309\,73\text{j}$

   (d) $0.337\,92 + 0.769\,64\text{j}$

2. $33.3333\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

   i. $I = (0.321\,65 - 0.158\,75\text{j})\,\text{A}$

   ii. $V_R = (16.0823 - 7.937\,58\text{j})\,\text{V}$

   iii. $V_L = (17.9544 + 36.3774\text{j})\,\text{V}$

   iv. $V_C = (-14.0367 - 28.4398\text{j})\,\text{V}$

   v. $P_R = (3.9127 - 5.1062\text{j})\,\text{W}$

   vi. $P_L = (11.5499 + 8.850\,39\text{j})\,\text{W}$

   vii. $P_C = (-9.029\,73 - 6.919\,23\text{j})\,\text{W}$

Answers

1. (a) $-908 - 297\text{j}$

   (b) $-29.566 + 30.0189\text{j}$

   (c) $7.2 + 9.1\text{j}$

   (d) $0.476\,66 + 1.066\text{j}$

2. $20.8333\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

        i. $I = (0.036\,112 - 0.1427\text{j})\,\text{A}$

        ii. $V_R = (1.8056 - 7.135\text{j})\,\text{V}$

        iii. $V_L = (37.6574 + 9.529\,71\text{j})\,\text{V}$

        iv. $V_C = (-9.463 - 2.3947\text{j})\,\text{V}$

        v. $P_R = (-0.952\,95 - 0.515\,31\text{j})\,\text{W}$

        vi. $P_L = (2.7198 - 5.0296\text{j})\,\text{W}$

        vii. $P_C = (-0.683\,46 + 1.2639\text{j})\,\text{W}$

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*12666518*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***SAMUEL ROSAS GONZALEZ***		

Answers

1. (a) $-236 + 115\text{j}$

   (b) $-15.7 + 51.1\text{j}$

   (c) $2.7059 + 5.6765\text{j}$

   (d) $0.435\,84 + 0.532\,95\text{j}$

2. $46.6667\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

   i. $I = (0.189\,78 - 0.355\,88\text{j})\,\text{A}$

   ii. $V_R = (13.2849 - 24.9119\text{j})\,\text{V}$

   iii. $V_L = (93.915\,82 + 50.082\,84\text{j})\,\text{V}$

   iv. $V_C = (-47.2007 - 25.1709\text{j})\,\text{V}$

   v. $P_R = (-6.344\,53 - 9.455\,78\text{j})\,\text{W}$

   vi. $P_L = (35.6475 - 23.9183\text{j})\,\text{W}$

   vii. $P_C = (-17.9159 + 12.021\text{j})\,\text{W}$

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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*12064655*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	*EDSON ORLANDONAVARRO RAMIREZ*		

Answers

1. (a) $-250 + 250\text{j}$

   (b) $30 + 60\text{j}$

   (c) $4.641 + 7.1282\text{j}$

   (d) $0.505\,88 + 0.576\,47\text{j}$

2. $5\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

       i. $I = (1.7839 - 2.2012\text{j})\,\text{A}$

       ii. $V_R = (35.6789 - 44.0241\text{j})\,\text{V}$

       iii. $V_L = (248.9501 + 201.7594\text{j})\,\text{V}$

       iv. $V_C = (-194.629 - 157.7353\text{j})\,\text{V}$

       v. $P_R = (-33.256\,67 - 157.0729\text{j})\,\text{W}$

       vi. $P_L = (888.2266 - 188.0621\text{j})\,\text{W}$

       vii. $P_C = (-694.4149 + 147.0268\text{j})\,\text{W}$

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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*11126870*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*JUAN GAEL GONZALEZ RODRIGUEZ*		

Answers

1. (a) $-835 + 88\mathrm{j}$

   (b) $-33.2787 + 64.9344\mathrm{j}$

   (c) $6.4634 + 6.1707\mathrm{j}$

   (d) $0.5686 + 0.906\,01\mathrm{j}$

2. $10\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

   i. $I = (0.082\,454 - 0.275\,05\mathrm{j})\,\mathrm{A}$

   ii. $V_R = (2.4736 - 8.2516\mathrm{j})\,\mathrm{V}$

   iii. $V_L = (51.8465 + 15.5421\mathrm{j})\,\mathrm{V}$

   iv. $V_C = (-24.3202 - 7.2905\mathrm{j})\,\mathrm{V}$

   v. $P_R = (-2.0657 - 1.3608\mathrm{j})\,\mathrm{W}$

   vi. $P_L = (8.549\,87 - 12.9791\mathrm{j})\,\mathrm{W}$

   vii. $P_C = (-4.0106 + 6.0882\mathrm{j})\,\mathrm{W}$

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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	*14155580*
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*LUIS ALEJANDRO URBINA GONZALEZ*		

Answers

1. (a) $-1001 + 664j$

    (b) $-39.18 + 88.24j$

    (c) $7.164\,38 + 7.561\,64j$

    (d) $0.817\,73 + 0.884\,78j$

2. $13.3333\,\Omega$

3. $R(1 + \sqrt{3})$

4. (a) Figure 3

    i. $I = (0.042\,678 - 0.289\,02j)\,\text{A}$

    ii. $V_R = (0.853\,56 - 5.7805j)\,\text{V}$

    iii. $V_L = (54.4796 + 8.0446j)\,\text{V}$

    iv. $V_C = (-15.3332 - 2.264\,13j)\,\text{V}$

    v. $P_R = (-1.6343 - 0.4934j)\,\text{W}$

    vi. $P_L = (4.650\,15 - 15.4025j)\,\text{W}$

    vii. $P_C = (-1.3088 + 4.335j)\,\text{W}$