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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14137625*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*JESUS EMMANUEL MORALES MENUIOLA*		

Answers

1.

Figure 1

(a) $I = (1.0113 - j0.491\,31)\,\text{A}$

(b) $V_R = (40.4527 - j19.6523)\,\text{V}$

(c) $V_L = (13.8914 + j28.5943)\,\text{V}$

(d) $V_C = (-4.3441 - j8.942)\,\text{V}$

(e) $v(0.05) = -1.7328 \times 10^{-13}\,\text{V}$

(f) $i(0.05) = 0.694\,81\,\text{A}$

(g) $v_R(0.05) = 27.7926\,\text{V}$

(h) $v_L(0.05) = -40.4385\,\text{V}$

(i) $v_C(0.05) = 12.6459\,\text{V}$

Figure 2

(a) $V_{R1} = (42.6831 + j11.3748)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (7.316\,89 - j11.3748)\,\text{V}$

(c) $I_{R1} = (1.0671 + j0.284\,37)\,\text{A}$

(d) $I_{R2} = (0.182\,92 - j0.284\,37)\,\text{A}$

(e) $I_L = (-0.4023 - j0.258\,78)\,\text{A}$

(f) $I_C = (1.2865 + j0.827\,52)\,\text{A}$

(g) $v(0.05) = -1.7328 \times 10^{-13}\,\text{V}$

(h) $v_{R1}(0.05) = -16.0863\,\text{V}$

(i) $v_{R2}(0.05) = v_L(0.05) = v_C(0.05) = 16.0863\,\text{V}$

(j) $i_{R1}(0.05) = -0.402\,16\,\text{A}$

(k) $i_{R2}(0.05) = 0.402\,16\,\text{A}$

(l) $i_L(0.05) = 0.365\,97\,\text{A}$

(m) $i_C(0.05) = -1.1703\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14121732*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*JOEL GERARDO AGUERO LLANAS*		

Answers

1.

Figure 1

(a) $I = (1.3979 + j0.054\,606)\,\text{A}$

(b) $V_R = (69.8933 + j2.730\,28)\,\text{V}$

(c) $V_L = (-0.617\,576 + j15.8095)\,\text{V}$

(d) $V_C = (0.724\,23 - j18.5398)\,\text{V}$

(e) $v(0.07) = 58.1878\,\text{V}$

(f) $i(0.07) = 1.0995\,\text{A}$

(g) $v_R(0.07) = 54.9753\,\text{V}$

(h) $v_L(0.07) = -18.6014\,\text{V}$

(i) $v_C(0.07) = 21.8138\,\text{V}$

Figure 2

(a) $V_{R1} = (38.3536 - j10.3019)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (31.6464 + j10.3019)\,\text{V}$

(c) $I_{R1} = (0.767\,07 - j0.206\,04)\,\text{A}$

(d) $I_{R2} = (0.632\,93 + j0.206\,04)\,\text{A}$

(e) $I_L = (0.910\,88 - j2.7982)\,\text{A}$

(f) $I_C = (-0.776\,74 + j2.3861)\,\text{A}$

(g) $v(0.07) = 58.1878\,\text{V}$

(h) $v_{R1}(0.07) = 43.6681\,\text{V}$

(i) $v_{R2}(0.07) = v_L(0.07) = v_C(0.07) = 14.5196\,\text{V}$

(j) $i_{R1}(0.07) = 0.873\,36\,\text{A}$

(k) $i_{R2}(0.07) = 0.290\,39\,\text{A}$

(l) $i_L(0.07) = 3.9586\,\text{A}$

(m) $i_C(0.07) = -3.3756\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14124427*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ $\big/$ 10
Student's name	**_JERSON CHAVEZ ORTIZ_**		

Answers

1.

Figure 1

(a) $I = (1.1666 + \text{j}0.004\,661\,9)\,\text{A}$

(b) $V_R = (69.9989 + \text{j}0.279\,716)\,\text{V}$

(c) $V_L = (-0.026\,363 + \text{j}6.5972)\,\text{V}$

(d) $V_C = (0.027\,48 - \text{j}6.877)\,\text{V}$

(e) $v(0.07) = 3.637 \times 10^{-14}\,\text{V}$

(f) $i(0.07) = -0.006\,593\,\text{A}$

(g) $v_R(0.07) = -0.395\,58\,\text{V}$

(h) $v_L(0.07) = -9.3299\,\text{V}$

(i) $v_C(0.07) = 9.7255\,\text{V}$

Figure 2

(a) $V_{R1} = (36.5572 - \text{j}7.216\,44)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (33.4428 + \text{j}7.216\,44)\,\text{V}$

(c) $I_{R1} = (0.609\,29 - \text{j}0.120\,27)\,\text{A}$

(d) $I_{R2} = (0.557\,38 + \text{j}0.120\,27)\,\text{A}$

(e) $I_L = (1.2761 - \text{j}5.914)\,\text{A}$

(f) $I_C = (-1.2242 + \text{j}5.6734)\,\text{A}$

(g) $v(0.07) = 3.637 \times 10^{-14}\,\text{V}$

(h) $v_{R1}(0.07) = 10.2056\,\text{V}$

(i) $v_{R2}(0.07) = v_L(0.07) = v_C(0.07) = -10.2056\,\text{V}$

(j) $i_{R1}(0.07) = 0.170\,09\,\text{A}$

(k) $i_{R2}(0.07) = -0.170\,09\,\text{A}$

(l) $i_L(0.07) = 8.3636\,\text{A}$

(m) $i_C(0.07) = -8.0235\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14156040*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	*LUIS ANTNONIO FERNENDEZ CARRASCO*		

Answers

1.

Figure 1

(a) $I = (0.688\,77 - j0.205\,37)\,\text{A}$

(b) $V_R = (55.1013 - j16.4294)\,\text{V}$

(c) $V_L = (5.806\,63 + j19.4744)\,\text{V}$

(d) $V_C = (-0.907\,92 - j3.045)\,\text{V}$

(e) $v(0.06) = 80.6998\,\text{V}$

(f) $i(0.06) = 1.0161\,\text{A}$

(g) $v_R(0.06) = 81.291\,\text{V}$

(h) $v_L(0.06) = -0.700\,73\,\text{V}$

(i) $v_C(0.06) = 0.109\,57\,\text{V}$

Figure 2

(a) $V_{R1} = (59.4938 + j3.863\,95)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (0.506\,21 - j3.8639)\,\text{V}$

(c) $I_{R1} = (0.743\,67 + j0.048\,299)\,\text{A}$

(d) $I_{R2} = (0.006\,327\,6 - j0.048\,299)\,\text{A}$

(e) $I_L = (-0.136\,66 - j0.017\,904)\,\text{A}$

(f) $I_C = (0.874 + j0.1145)\,\text{A}$

(g) $v(0.06) = 80.6998\,\text{V}$

(h) $v_{R1}(0.06) = 78.3304\,\text{V}$

(i) $v_{R2}(0.06) = v_L(0.06) = v_C(0.06) = 2.3695\,\text{V}$

(j) $i_{R1}(0.06) = 0.979\,13\,\text{A}$

(k) $i_{R2}(0.06) = 0.029\,618\,\text{A}$

(l) $i_L(0.06) = -0.175\,98\,\text{A}$

(m) $i_C(0.06) = 1.1255\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14156037*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*MICHAEL MURILLO MENDEZ*		

Answers

1.

Figure 1

  (a) $I = (0.208\,44 - j0.053\,596)\,\text{A}$

  (b) $V_R = (18.7597 - j4.823\,61)\,\text{V}$

  (c) $V_L = (1.4144 + j5.5006)\,\text{V}$

  (d) $V_C = (-0.174\,08 - j0.677\,03)\,\text{V}$

  (e) $v(0.02) = 26.8999\,\text{V}$

  (f) $i(0.02) = 0.256\,93\,\text{A}$

  (g) $v_R(0.02) = 23.1238\,\text{V}$

  (h) $v_L(0.02) = 4.3062\,\text{V}$

  (i) $v_C(0.02) = -0.530\,01\,\text{V}$

Figure 2

  (a) $V_{R1} = (19.9327 + j0.817\,561)\,\text{V}$

  (b) $V_{R2} = V_L = V_C = (0.067\,293 - j0.817\,56)\,\text{V}$

  (c) $I_{R1} = (0.221\,47 + j0.009\,084)\,\text{A}$

  (d) $I_{R2} = (0.000\,747\,71 - j0.009\,084)\,\text{A}$

  (e) $I_L = (-0.030\,981 - j0.002\,55)\,\text{A}$

  (f) $I_C = (0.251\,71 + j0.020\,718)\,\text{A}$

  (g) $v(0.02) = 26.8999\,\text{V}$

  (h) $v_{R1}(0.02) = 27.1667\,\text{V}$

  (i) $v_{R2}(0.02) = v_L(0.02) = v_C(0.02) = -0.266\,78\,\text{V}$

  (j) $i_{R1}(0.02) = 0.301\,85\,\text{A}$

  (k) $i_{R2}(0.02) = -0.002\,964\,2\,\text{A}$

  (l) $i_L(0.02) = -0.042\,783\,\text{A}$

  (m) $i_C(0.02) = 0.3476\,\text{A}$

2. (a) a

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*11073892*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*JOSUE AMADOR SIFUENTES*		

Answers

1.

Figure 1

    (a) $I = (0.398\,95 - \text{j}0.134\,72)\,\text{A}$

    (b) $V_R = (35.9055 - \text{j}12.125)\,\text{V}$

    (c) $V_L = (4.571\,03 + \text{j}13.536)\,\text{V}$

    (d) $V_C = (-0.476\,48 - \text{j}1.411)\,\text{V}$

    (e) $v(0.04) = -53.7999\,\text{V}$

    (f) $i(0.04) = -0.595\,46\,\text{A}$

    (g) $v_R(0.04) = -53.5916\,\text{V}$

    (h) $v_L(0.04) = -0.232\,56\,\text{V}$

    (i) $v_C(0.04) = 0.024\,242\,\text{V}$

Figure 2

    (a) $V_{R1} = (39.8472 + \text{j}1.741\,42)\,\text{V}$

    (b) $V_{R2} = V_L = V_C = (0.152\,79 - \text{j}1.7414)\,\text{V}$

    (c) $I_{R1} = (0.442\,75 + \text{j}0.019\,349)\,\text{A}$

    (d) $I_{R2} = (0.001\,697\,7 - \text{j}0.019\,349)\,\text{A}$

    (e) $I_L = (-0.051\,325 - \text{j}0.004\,503\,3)\,\text{A}$

    (f) $I_C = (0.492\,37 + \text{j}0.043\,201)\,\text{A}$

    (g) $v(0.04) = -53.7999\,\text{V}$

    (h) $v_{R1}(0.04) = -52.8333\,\text{V}$

    (i) $v_{R2}(0.04) = v_L(0.04) = v_C(0.04) = -0.966\,53\,\text{V}$

    (j) $i_{R1}(0.04) = -0.587\,04\,\text{A}$

    (k) $i_{R2}(0.04) = -0.010\,739\,\text{A}$

    (l) $i_L(0.04) = 0.067\,064\,\text{A}$

    (m) $i_C(0.04) = -0.643\,36\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II		Group	5A
Degree	Electrical engineering		Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals		Registration #	*11268436*
Professor's name	Dr. Suresh Kumar Gadi		Marks Obtained	_____ /10
Student's name	*EDUARDO ZALDIVAR MARTINEZ*			

Answers

1.

Figure 1

(a) $I = (0.713\,04 + j0.029\,858)\,\text{A}$

(b) $V_R = (49.9125 + j2.090\,05)\,\text{V}$

(c) $V_L = (-0.150\,08 + j3.5841)\,\text{V}$

(d) $V_C = (0.2376 - j5.6742)\,\text{V}$

(e) $v(0.05) = -41.5627\,\text{V}$

(f) $i(0.05) = -0.626\,87\,\text{A}$

(g) $v_R(0.05) = -43.8812\,\text{V}$

(h) $v_L(0.05) = -3.9759\,\text{V}$

(i) $v_C(0.05) = 6.2944\,\text{V}$

Figure 2

(a) $V_{R1} = (46.7011 - j8.461\,12)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (3.2989 + j8.4611)\,\text{V}$

(c) $I_{R1} = (0.667\,16 - j0.120\,87)\,\text{A}$

(d) $I_{R2} = (0.047\,128 + j0.120\,87)\,\text{A}$

(e) $I_L = (1.6833 - j0.6563)\,\text{A}$

(f) $I_C = (-1.0633 + j0.414\,56)\,\text{A}$

(g) $v(0.05) = -41.5627\,\text{V}$

(h) $v_{R1}(0.05) = -29.1399\,\text{V}$

(i) $v_{R2}(0.05) = v_L(0.05) = v_C(0.05) = -12.4228\,\text{V}$

(j) $i_{R1}(0.05) = -0.416\,28\,\text{A}$

(k) $i_{R2}(0.05) = -0.177\,47\,\text{A}$

(l) $i_L(0.05) = -0.648\,35\,\text{A}$

(m) $i_C(0.05) = 0.409\,53\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14140390*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*LUIS DAVID MARENTES REYES*		

Answers

1.

Figure 1

(a) $I = (0.776\,12 - \text{j}0.277\,02)\,\text{A}$

(b) $V_R = (62.0898 - \text{j}22.1617)\,\text{V}$

(c) $V_L = (9.747\,23 + \text{j}27.3085)\,\text{V}$

(d) $V_C = (-1.8371 - \text{j}5.1468)\,\text{V}$

(e) $v(0.07) = 58.1878\,\text{V}$

(f) $i(0.07) = 0.9621\,\text{A}$

(g) $v_R(0.07) = 76.9681\,\text{V}$

(h) $v_L(0.07) = -23.1419\,\text{V}$

(i) $v_C(0.07) = 4.3615\,\text{V}$

Figure 2

(a) $V_{R1} = (68.5978 + \text{j}6.863\,65)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (1.4022 - \text{j}6.8637)\,\text{V}$

(c) $I_{R1} = (0.857\,47 + \text{j}0.085\,796)\,\text{A}$

(d) $I_{R2} = (0.017\,527 - \text{j}0.085\,796)\,\text{A}$

(e) $I_L = (-0.195\,07 - \text{j}0.039\,85)\,\text{A}$

(f) $I_C = (1.035 + \text{j}0.211\,44)\,\text{A}$

(g) $v(0.07) = 58.1878\,\text{V}$

(h) $v_{R1}(0.07) = 49.1694\,\text{V}$

(i) $v_{R2}(0.07) = v_L(0.07) = v_C(0.07) = 9.0184\,\text{V}$

(j) $i_{R1}(0.07) = 0.614\,62\,\text{A}$

(k) $i_{R2}(0.07) = 0.112\,73\,\text{A}$

(l) $i_L(0.07) = -0.116\,56\,\text{A}$

(m) $i_C(0.07) = 0.618\,44\,\text{A}$

2. (a) a

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*12068799*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*JESUS ANTONIO ROBLESREYES*		

Answers

1.

Figure 1

(a) $I = (1.363 + j0.224\,53)\,\text{A}$

(b) $V_R = (68.1507 + j11.2263)\,\text{V}$

(c) $V_L = (-1.1286 + j6.8513)\,\text{V}$

(d) $V_C = (2.977\,86 - j18.0775)\,\text{V}$

(e) $v(0.07) = -4.8494 \times 10^{-14}\,\text{V}$

(f) $i(0.07) = 0.317\,53\,\text{A}$

(g) $v_R(0.07) = 15.8764\,\text{V}$

(h) $v_L(0.07) = 9.6891\,\text{V}$

(i) $v_C(0.07) = -25.5655\,\text{V}$

Figure 2

(a) $V_{R1} = (66.6792 - j10.2567)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (3.320\,79 + j10.2567)\,\text{V}$

(c) $I_{R1} = (1.3336 - j0.205\,13)\,\text{A}$

(d) $I_{R2} = (0.066\,416 + j0.205\,13)\,\text{A}$

(e) $I_L = (2.0405 - j0.660\,65)\,\text{A}$

(f) $I_C = (-0.773\,34 + j0.250\,38)\,\text{A}$

(g) $v(0.07) = -4.8494 \times 10^{-14}\,\text{V}$

(h) $v_{R1}(0.07) = -14.5052\,\text{V}$

(i) $v_{R2}(0.07) = v_L(0.07) = v_C(0.07) = 14.5052\,\text{V}$

(j) $i_{R1}(0.07) = -0.2901\,\text{A}$

(k) $i_{R2}(0.07) = 0.2901\,\text{A}$

(l) $i_L(0.07) = -0.9343\,\text{A}$

(m) $i_C(0.07) = 0.354\,09\,\text{A}$

2. (a) a

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14150725*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*LILIANA VERA GLZ*		

Answers

1.

Figure 1

(a) $I = (2.9615 - j0.337\,77)\,\text{A}$

(b) $V_R = (88.8443 - j10.1331)\,\text{V}$

(c) $V_L = (3.395\,64 + j29.772)\,\text{V}$

(d) $V_C = (-2.239\,91 - j19.6389)\,\text{V}$

(e) $v(0.09) = -6.2349 \times 10^{-14}\,\text{V}$

(f) $i(0.09) = -0.477\,68\,\text{A}$

(g) $v_R(0.09) = -14.3304\,\text{V}$

(h) $v_L(0.09) = 42.104\,\text{V}$

(i) $v_C(0.09) = -27.7736\,\text{V}$

Figure 2

(a) $V_{R1} = (61.7461 + j21.7518)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (28.2539 - j21.7518)\,\text{V}$

(c) $I_{R1} = (2.0582 + j0.725\,06)\,\text{A}$

(d) $I_{R2} = (0.9418 - j0.725\,06)\,\text{A}$

(e) $I_L = (-2.1637 - j2.8105)\,\text{A}$

(f) $I_C = (3.2801 + j4.2606)\,\text{A}$

(g) $v(0.09) = -6.2349 \times 10^{-14}\,\text{V}$

(h) $v_{R1}(0.09) = 30.7617\,\text{V}$

(i) $v_{R2}(0.09) = v_L(0.09) = v_C(0.09) = -30.7617\,\text{V}$

(j) $i_{R1}(0.09) = 1.0254\,\text{A}$

(k) $i_{R2}(0.09) = -1.0254\,\text{A}$

(l) $i_L(0.09) = -3.9746\,\text{A}$

(m) $i_C(0.09) = 6.0254\,\text{A}$

2. (a) a

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14125016*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*DAVID OTHONIEL SALDIVAR PEREZ*		

Answers

1.

Figure 1

(a) $I = (1.4799 - j0.525\,78)\,\text{A}$

(b) $V_R = (44.3959 - j15.7734)\,\text{V}$

(c) $V_L = (7.928\,56 + j22.3158)\,\text{V}$

(d) $V_C = (-2.3245 - j6.5424)\,\text{V}$

(e) $v(0.05) = -67.2499\,\text{V}$

(f) $i(0.05) = -2.2202\,\text{A}$

(g) $v_R(0.05) = -66.6056\,\text{V}$

(h) $v_L(0.05) = -0.911\,53\,\text{V}$

(i) $v_C(0.05) = 0.267\,24\,\text{V}$

Figure 2

(a) $V_{R1} = (46.297 + j8.880\,42)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (3.703 - j8.8804)\,\text{V}$

(c) $I_{R1} = (1.5432 + j0.296\,01)\,\text{A}$

(d) $I_{R2} = (0.123\,43 - j0.296\,01)\,\text{A}$

(e) $I_L = (-0.5889 - j0.245\,56)\,\text{A}$

(f) $I_C = (2.0087 + j0.837\,59)\,\text{A}$

(g) $v(0.05) = -67.2499\,\text{V}$

(h) $v_{R1}(0.05) = -58.3885\,\text{V}$

(i) $v_{R2}(0.05) = v_L(0.05) = v_C(0.05) = -8.8613\,\text{V}$

(j) $i_{R1}(0.05) = -1.9463\,\text{A}$

(k) $i_{R2}(0.05) = -0.295\,38\,\text{A}$

(l) $i_L(0.05) = 0.684\,76\,\text{A}$

(m) $i_C(0.05) = -2.3357\,\text{A}$

2. (a) a

Answers

1.

Figure 1

(a) $I = (1.3286 - \text{j}0.600\,51)\,\text{A}$

(b) $V_R = (66.4284 - \text{j}30.0256)\,\text{V}$

(c) $V_L = (15.8471 + \text{j}35.0601)\,\text{V}$

(d) $V_C = (-2.2756 - \text{j}5.0345)\,\text{V}$

(e) $v(0.08) = -107.5998\,\text{V}$

(f) $i(0.08) = -2.0494\,\text{A}$

(g) $v_R(0.08) = -102.4677\,\text{V}$

(h) $v_L(0.08) = -5.9925\,\text{V}$

(i) $v_C(0.08) = 0.8605\,\text{V}$

Figure 2

(a) $V_{R1} = (78.785 + \text{j}6.864\,61)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (1.215 - \text{j}6.8646)\,\text{V}$

(c) $I_{R1} = (1.5757 + \text{j}0.137\,29)\,\text{A}$

(d) $I_{R2} = (0.0243 - \text{j}0.137\,29)\,\text{A}$

(e) $I_L = (-0.260\,13 - \text{j}0.046\,04)\,\text{A}$

(f) $I_C = (1.8115 + \text{j}0.320\,62)\,\text{A}$

(g) $v(0.08) = -107.5998\,\text{V}$

(h) $v_{R1}(0.08) = -102.9657\,\text{V}$

(i) $v_{R2}(0.08) = v_L(0.08) = v_C(0.08) = -4.6341\,\text{V}$

(j) $i_{R1}(0.08) = -2.0593\,\text{A}$

(k) $i_{R2}(0.08) = -0.092\,682\,\text{A}$

(l) $i_L(0.08) = 0.329\,75\,\text{A}$

(m) $i_C(0.08) = -2.2964\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*12666518*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	*SAMUEL ROSAS GONZALEZ*		

Answers

1.

Figure 1

(a) $I = (0.757\,87 - j0.428\,37)\,\text{A}$

(b) $V_R = (37.8937 - j21.4185)\,\text{V}$

(c) $V_L = (13.1885 + j23.3331)\,\text{V}$

(d) $V_C = (-1.0822 - j1.9146)\,\text{V}$

(e) $v(0.05) = 41.5627\,\text{V}$

(f) $i(0.05) = 0.139\,88\,\text{A}$

(g) $v_R(0.05) = 6.9938\,\text{V}$

(h) $v_L(0.05) = 37.6589\,\text{V}$

(i) $v_C(0.05) = -3.0901\,\text{V}$

Figure 2

(a) $V_{R1} = (49.7007 + j2.719\,14)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (0.299\,33 - j2.7191)\,\text{V}$

(c) $I_{R1} = (0.994\,01 + j0.054\,383)\,\text{A}$

(d) $I_{R2} = (0.005\,986\,7 - j0.054\,383)\,\text{A}$

(e) $I_L = (-0.088\,319 - j0.009\,722\,5)\,\text{A}$

(f) $I_C = (1.0763 + j0.118\,49)\,\text{A}$

(g) $v(0.05) = 41.5627\,\text{V}$

(h) $v_{R1}(0.05) = 44.4249\,\text{V}$

(i) $v_{R2}(0.05) = v_L(0.05) = v_C(0.05) = -2.8622\,\text{V}$

(j) $i_{R1}(0.05) = 0.8885\,\text{A}$

(k) $i_{R2}(0.05) = -0.057\,244\,\text{A}$

(l) $i_L(0.05) = -0.084\,539\,\text{A}$

(m) $i_C(0.05) = 1.0303\,\text{A}$

2. (a) a

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*12064655*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*EDSON ORLANDONAVARRO RAMIREZ*		

Answers

1.

Figure 1

(a) $I = (1.222 - j0.2791)\,\text{A}$

(b) $V_R = (85.5378 - j19.5368)\,\text{V}$

(c) $V_L = (6.313\,04 + j27.6403)\,\text{V}$

(d) $V_C = (-1.8508 - j8.1034)\,\text{V}$

(e) $v(0.09) = -121.0497\,\text{V}$

(f) $i(0.09) = -1.7655\,\text{A}$

(g) $v_R(0.09) = -123.586\,\text{V}$

(h) $v_L(0.09) = 3.5882\,\text{V}$

(i) $v_C(0.09) = -1.052\,\text{V}$

Figure 2

(a) $V_{R1} = (86.9833 + j11.254)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (3.016\,71 - j11.254)\,\text{V}$

(c) $I_{R1} = (1.2426 + j0.160\,77)\,\text{A}$

(d) $I_{R2} = (0.043\,096 - j0.160\,77)\,\text{A}$

(e) $I_L = (-0.497\,53 - j0.133\,37)\,\text{A}$

(f) $I_C = (1.6971 + j0.454\,91)\,\text{A}$

(g) $v(0.09) = -121.0497\,\text{V}$

(h) $v_{R1}(0.09) = -112.0741\,\text{V}$

(i) $v_{R2}(0.09) = v_L(0.09) = v_C(0.09) = -8.9756\,\text{V}$

(j) $i_{R1}(0.09) = -1.6011\,\text{A}$

(k) $i_{R2}(0.09) = -0.128\,22\,\text{A}$

(l) $i_L(0.09) = 0.6109\,\text{A}$

(m) $i_C(0.09) = -2.0837\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*11126870*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*JUAN GAEL GONZALEZ RODRIGUEZ*		

Answers

1.

Figure 1

(a) $I = (0.990\,56 - j0.710\,37)\,\text{A}$

(b) $V_R = (59.4338 - j42.6224)\,\text{V}$

(c) $V_L = (32.1365 + j44.812)\,\text{V}$

(d) $V_C = (-1.5703 - j2.1896)\,\text{V}$

(e) $v(0.09) = 74.8128\,\text{V}$

(f) $i(0.09) = 1.6362\,\text{A}$

(g) $v_R(0.09) = 98.1698\,\text{V}$

(h) $v_L(0.09) = -24.5568\,\text{V}$

(i) $v_C(0.09) = 1.1999\,\text{V}$

Figure 2

(a) $V_{R1} = (89.7316 + j3.465\,27)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (0.268\,45 - j3.4653)\,\text{V}$

(c) $I_{R1} = (1.4955 + j0.057\,754)\,\text{A}$

(d) $I_{R2} = (0.004\,474\,1 - j0.057\,754)\,\text{A}$

(e) $I_L = (-0.076\,599 - j0.005\,934)\,\text{A}$

(f) $I_C = (1.5677 + j0.121\,44)\,\text{A}$

(g) $v(0.09) = 74.8128\,\text{V}$

(h) $v_{R1}(0.09) = 70.625\,\text{V}$

(i) $v_{R2}(0.09) = v_L(0.09) = v_C(0.09) = 4.1878\,\text{V}$

(j) $i_{R1}(0.09) = 1.1771\,\text{A}$

(k) $i_{R2}(0.09) = 0.069\,797\,\text{A}$

(l) $i_L(0.09) = -0.056\,884\,\text{A}$

(m) $i_C(0.09) = 1.1642\,\text{A}$

2. (a) a

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14155580*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	*LUIS ALEJANDRO URBINA GONZALEZ*		

Answers

1.

Figure 1

(a) $I = (0.664\,88 - j0.034\,489)\,\text{A}$

(b) $V_R = (39.8927 - j2.069\,33)\,\text{V}$

(c) $V_L = (0.303\,38 + j5.8486)\,\text{V}$

(d) $V_C = (-0.196\,04 - j3.7792)\,\text{V}$

(e) $v(0.04) = -33.2502\,\text{V}$

(f) $i(0.04) = -0.592\,14\,\text{A}$

(g) $v_R(0.04) = -35.5285\,\text{V}$

(h) $v_L(0.04) = 6.4393\,\text{V}$

(i) $v_C(0.04) = -4.161\,\text{V}$

Figure 2

(a) $V_{R1} = (35.5429 + j8.323\,23)\,\text{V}$

(b) $V_{R2} = V_L = V_C = (4.4571 - j8.3232)\,\text{V}$

(c) $I_{R1} = (0.592\,38 + j0.138\,72)\,\text{A}$

(d) $I_{R2} = (0.074\,285 - j0.138\,72)\,\text{A}$

(e) $I_L = (-0.9462 - j0.506\,69)\,\text{A}$

(f) $I_C = (1.4643 + j0.784\,13)\,\text{A}$

(g) $v(0.04) = -33.2502\,\text{V}$

(h) $v_{R1}(0.04) = -20.0224\,\text{V}$

(i) $v_{R2}(0.04) = v_L(0.04) = v_C(0.04) = -13.2278\,\text{V}$

(j) $i_{R1}(0.04) = -0.333\,71\,\text{A}$

(k) $i_{R2}(0.04) = -0.220\,46\,\text{A}$

(l) $i_L(0.04) = 0.206\,82\,\text{A}$

(m) $i_C(0.04) = -0.320\,06\,\text{A}$

2. (a) a

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundementals	Registration #	*14629184*
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	_____ /10
Student's name	*JOSE WALDO QUINTANA ARANDA*		

Answers

1.

Figure 1

  (a) $I = (0.746\,18 - \text{j}0.200\,39)\,\text{A}$

  (b) $V_R = (37.3092 - \text{j}10.0196)\,\text{V}$

  (c) $V_L = (3.399\,58 + \text{j}12.6587)\,\text{V}$

  (d) $V_C = (-0.708\,74 - \text{j}2.6391)\,\text{V}$

  (e) $v(0.04) = -1.3862 \times 10^{-13}\,\text{V}$

  (f) $i(0.04) = 0.2834\,\text{A}$

  (g) $v_R(0.04) = 14.1699\,\text{V}$

  (h) $v_L(0.04) = -17.9021\,\text{V}$

  (i) $v_C(0.04) = 3.7322\,\text{V}$

Figure 2

  (a) $V_{R1} = (39.3809 + \text{j}3.464\,01)\,\text{V}$

  (b) $V_{R2} = V_L = V_C = (0.619\,13 - \text{j}3.464)\,\text{V}$

  (c) $I_{R1} = (0.787\,62 + \text{j}0.069\,28)\,\text{A}$

  (d) $I_{R2} = (0.012\,383 - \text{j}0.069\,28)\,\text{A}$

  (e) $I_L = (-0.204\,19 - \text{j}0.036\,496)\,\text{A}$

  (f) $I_C = (0.979\,42 + \text{j}0.175\,06)\,\text{A}$

  (g) $v(0.04) = -1.3862 \times 10^{-13}\,\text{V}$

  (h) $v_{R1}(0.04) = -4.8988\,\text{V}$

  (i) $v_{R2}(0.04) = v_L(0.04) = v_C(0.04) = 4.8988\,\text{V}$

  (j) $i_{R1}(0.04) = -0.097\,977\,\text{A}$

  (k) $i_{R2}(0.04) = 0.097\,977\,\text{A}$

  (l) $i_L(0.04) = 0.051\,613\,\text{A}$

  (m) $i_C(0.04) = -0.247\,57\,\text{A}$

2. (a) a