



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. Fundamentals	Registration #	14137625
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JESUS EMMANUEL MORALES MENUIOLA		

Answers

1.

Figure 1

- (a) $I = (1.0113 - j0.49131) \text{ A}$
- (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) $i(0.05) = 0.69481 \text{ A}$
- (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) $V_{R2} = V_L = V_C = (7.31689 - j11.3748) \text{ V}$
- (c) $I_{R1} = (1.0671 + j0.28437) \text{ A}$
- (d) $I_{R2} = (0.18292 - j0.28437) \text{ A}$
- (e) $I_L = (-0.4023 - j0.25878) \text{ A}$
- (f) $I_C = (1.2865 + j0.82752) \text{ A}$
- (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) $i_{R1}(0.05) = -0.40216 \text{ A}$
- (k) $i_{R2}(0.05) = 0.40216 \text{ A}$
- (l) $i_L(0.05) = 0.36597 \text{ A}$
- (m) $i_C(0.05) = -1.1703 \text{ A}$

2. (a) a



Universidad Autónoma de Coahuila

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Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundamentals	Registration #	14121732
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JOEL GERARDO AGUERO LLANAS		

Answers

1.

Figure 1

- (a) $I = (1.3979 + j0.054606) \text{ A}$
- (b) $V_R = (69.8933 + j2.73028) \text{ V}$
- (c) $V_L = (-0.617576 + j15.8095) \text{ V}$
- (d) $V_C = (0.72423 - j18.5398) \text{ V}$
- (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) $I_{R1} = (0.76707 - j0.20604) \text{ A}$
- (d) $I_{R2} = (0.63293 + j0.20604) \text{ A}$
- (e) $I_L = (0.91088 - j2.7982) \text{ A}$
- (f) $I_C = (-0.77674 + j2.3861) \text{ A}$
- (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) $i_{R1}(0.07) = 0.87336 \text{ A}$
- (k) $i_{R2}(0.07) = 0.29039 \text{ A}$
- (l) $i_L(0.07) = 3.9586 \text{ A}$
- (m) $i_C(0.07) = -3.3756 \text{ A}$

2. (a) a



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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundamentals	Registration #	14124427
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JERSON CHAVEZ ORTIZ		

Answers

1.

Figure 1

- (a) $I = (1.1666 + j0.0046619) \text{ A}$
- (b) $V_R = (69.9989 + j0.279716) \text{ V}$
- (c) $V_L = (-0.026363 + j6.5972) \text{ V}$
- (d) $V_C = (0.02748 - j6.877) \text{ V}$
- (e) $v(0.07) = 3.637 \times 10^{-14} \text{ V}$
- (f) $i(0.07) = -0.006593 \text{ A}$
- (g) $v_R(0.07) = -0.39558 \text{ V}$
- (h) $v_L(0.07) = -9.3299 \text{ V}$
- (i) $v_C(0.07) = 9.7255 \text{ V}$

Figure 2

- (a) $V_{R1} = (36.5572 - j7.21644) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (33.4428 + j7.21644) \text{ V}$
- (c) $I_{R1} = (0.60929 - j0.12027) \text{ A}$
- (d) $I_{R2} = (0.55738 + j0.12027) \text{ A}$
- (e) $I_L = (1.2761 - j5.914) \text{ A}$
- (f) $I_C = (-1.2242 + j5.6734) \text{ A}$
- (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) $i_{R1}(0.07) = 0.17009 \text{ A}$
- (k) $i_{R2}(0.07) = -0.17009 \text{ A}$
- (l) $i_L(0.07) = 8.3636 \text{ A}$
- (m) $i_C(0.07) = -8.0235 \text{ A}$

2. (a) a



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

Answers

1.

Figure 1

- (a) $I = (0.68877 - j0.20537) \text{ A}$
- (b) $V_R = (55.1013 - j16.4294) \text{ V}$
- (c) $V_L = (5.80663 + j19.4744) \text{ V}$
- (d) $V_C = (-0.90792 - j3.045) \text{ V}$
- (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) $v_L(0.06) = -0.70073 \text{ V}$
- (i) $v_C(0.06) = 0.10957 \text{ V}$

Figure 2

- (a) $V_{R1} = (59.4938 + j3.86395) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (0.50621 - j3.8639) \text{ V}$
- (c) $I_{R1} = (0.74367 + j0.048299) \text{ A}$
- (d) $I_{R2} = (0.0063276 - j0.048299) \text{ A}$
- (e) $I_L = (-0.13666 - j0.017904) \text{ A}$
- (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) $i_{R1}(0.06) = 0.97913 \text{ A}$
- (k) $i_{R2}(0.06) = 0.029618 \text{ A}$
- (l) $i_L(0.06) = -0.17598 \text{ A}$
- (m) $i_C(0.06) = 1.1255 \text{ A}$

2. (a) a



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Exam / Homework	Homework 2: A.C. Fundamentals	Registration #	14156037
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	MICHAEL MURILLO MENDEZ		

Answers

1.

Figure 1

- (a) $I = (0.20844 - j0.053596) \text{ A}$
- (b) $V_R = (18.7597 - j4.82361) \text{ V}$
- (c) $V_L = (1.4144 + j5.5006) \text{ V}$
- (d) $V_C = (-0.17408 - j0.67703) \text{ V}$
- (e) $v(0.02) = 26.8999 \text{ V}$
- (f) $i(0.02) = 0.25693 \text{ A}$
- (g) $v_R(0.02) = 23.1238 \text{ V}$
- (h) $v_L(0.02) = 4.3062 \text{ V}$
- (i) $v_C(0.02) = -0.53001 \text{ V}$

Figure 2

- (a) $V_{R1} = (19.9327 + j0.817561) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (0.067293 - j0.81756) \text{ V}$
- (c) $I_{R1} = (0.22147 + j0.009084) \text{ A}$
- (d) $I_{R2} = (0.00074771 - j0.009084) \text{ A}$
- (e) $I_L = (-0.030981 - j0.00255) \text{ A}$
- (f) $I_C = (0.25171 + j0.020718) \text{ A}$
- (g) $v(0.02) = 26.8999 \text{ V}$
- (h) $v_{R1}(0.02) = 27.1667 \text{ V}$
- (i) $v_{R2}(0.02) = v_L(0.02) = v_C(0.02) = -0.26678 \text{ V}$
- (j) $i_{R1}(0.02) = 0.30185 \text{ A}$
- (k) $i_{R2}(0.02) = -0.0029642 \text{ A}$
- (l) $i_L(0.02) = -0.042783 \text{ A}$
- (m) $i_C(0.02) = 0.3476 \text{ A}$

2. (a) a



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Unidad Torreón

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

Answers

1.

Figure 1

- (a) $I = (0.398\,95 - j0.134\,72)\text{ A}$
- (b) $V_R = (35.9055 - j12.125)\text{ V}$
- (c) $V_L = (4.571\,03 + j13.536)\text{ V}$
- (d) $V_C = (-0.476\,48 - j1.411)\text{ V}$
- (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) $V_{R1} = (39.8472 + j1.741\,42)\text{ V}$
- (b) $V_{R2} = V_L = V_C = (0.152\,79 - j1.7414)\text{ V}$
- (c) $I_{R1} = (0.442\,75 + j0.019\,349)\text{ A}$
- (d) $I_{R2} = (0.001\,697\,7 - j0.019\,349)\text{ A}$
- (e) $I_L = (-0.051\,325 - j0.004\,503\,3)\text{ A}$
- (f) $I_C = (0.492\,37 + j0.043\,201)\text{ A}$
- (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



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

Answers

1.

Figure 1

- (a) $I = (0.71304 + j0.029858) \text{ A}$
- (b) $V_R = (49.9125 + j2.09005) \text{ V}$
- (c) $V_L = (-0.15008 + j3.5841) \text{ V}$
- (d) $V_C = (0.2376 - j5.6742) \text{ V}$
- (e) $v(0.05) = -41.5627 \text{ V}$
- (f) $i(0.05) = -0.62687 \text{ A}$
- (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) $V_{R1} = (46.7011 - j8.46112) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (3.2989 + j8.4611) \text{ V}$
- (c) $I_{R1} = (0.66716 - j0.12087) \text{ A}$
- (d) $I_{R2} = (0.047128 + j0.12087) \text{ A}$
- (e) $I_L = (1.6833 - j0.6563) \text{ A}$
- (f) $I_C = (-1.0633 + j0.41456) \text{ A}$
- (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) $i_{R1}(0.05) = -0.41628 \text{ A}$
- (k) $i_{R2}(0.05) = -0.17747 \text{ A}$
- (l) $i_L(0.05) = -0.64835 \text{ A}$
- (m) $i_C(0.05) = 0.40953 \text{ A}$

2. (a) a



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

Answers

1.

Figure 1

- (a) $I = (0.776\ 12 - j0.277\ 02)\ \text{A}$
- (b) $V_R = (62.0898 - j22.1617)\ \text{V}$
- (c) $V_L = (9.747\ 23 + j27.3085)\ \text{V}$
- (d) $V_C = (-1.8371 - j5.1468)\ \text{V}$
- (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) $V_{R1} = (68.5978 + j6.863\ 65)\ \text{V}$
- (b) $V_{R2} = V_L = V_C = (1.4022 - j6.8637)\ \text{V}$
- (c) $I_{R1} = (0.857\ 47 + j0.085\ 796)\ \text{A}$
- (d) $I_{R2} = (0.017\ 527 - j0.085\ 796)\ \text{A}$
- (e) $I_L = (-0.195\ 07 - j0.039\ 85)\ \text{A}$
- (f) $I_C = (1.035 + j0.211\ 44)\ \text{A}$
- (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



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

Answers

1.

Figure 1

- (a) $I = (1.363 + j0.22453) \text{ A}$
- (b) $V_R = (68.1507 + j11.2263) \text{ V}$
- (c) $V_L = (-1.1286 + j6.8513) \text{ V}$
- (d) $V_C = (2.97786 - j18.0775) \text{ V}$
- (e) $v(0.07) = -4.8494 \times 10^{-14} \text{ V}$
- (f) $i(0.07) = 0.31753 \text{ A}$
- (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) $V_{R2} = V_L = V_C = (3.32079 + j10.2567) \text{ V}$
- (c) $I_{R1} = (1.3336 - j0.20513) \text{ A}$
- (d) $I_{R2} = (0.066416 + j0.20513) \text{ A}$
- (e) $I_L = (2.0405 - j0.66065) \text{ A}$
- (f) $I_C = (-0.77334 + j0.25038) \text{ A}$
- (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) $i_C(0.07) = 0.35409 \text{ A}$

2. (a) a



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Degree	Electrical engineering	Due for	15/09/2016
Exam / Homework	Homework 2: A.C. Fundamentals	Registration #	14150725
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	LILIANA VERA GLZ		

Answers

1.

Figure 1

- (a) $I = (2.9615 - j0.33777) \text{ A}$
- (b) $V_R = (88.8443 - j10.1331) \text{ V}$
- (c) $V_L = (3.39564 + j29.772) \text{ V}$
- (d) $V_C = (-2.23991 - j19.6389) \text{ V}$
- (e) $v(0.09) = -6.2349 \times 10^{-14} \text{ V}$
- (f) $i(0.09) = -0.47768 \text{ A}$
- (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) $I_{R1} = (2.0582 + j0.72506) \text{ A}$
- (d) $I_{R2} = (0.9418 - j0.72506) \text{ A}$
- (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



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

Answers

1.

Figure 1

- (a) $I = (1.4799 - j0.52578) \text{ A}$
- (b) $V_R = (44.3959 - j15.7734) \text{ V}$
- (c) $V_L = (7.92856 + j22.3158) \text{ V}$
- (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) $v_L(0.05) = -0.91153 \text{ V}$
- (i) $v_C(0.05) = 0.26724 \text{ V}$

Figure 2

- (a) $V_{R1} = (46.297 + j8.88042) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (3.703 - j8.8804) \text{ V}$
- (c) $I_{R1} = (1.5432 + j0.29601) \text{ A}$
- (d) $I_{R2} = (0.12343 - j0.29601) \text{ A}$
- (e) $I_L = (-0.5889 - j0.24556) \text{ A}$
- (f) $I_C = (2.0087 + j0.83759) \text{ A}$
- (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) $i_{R2}(0.05) = -0.29538 \text{ A}$
- (l) $i_L(0.05) = 0.68476 \text{ A}$
- (m) $i_C(0.05) = -2.3357 \text{ A}$

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. Fundamentals	Registration #	1205596
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	ALBERTO VAZQUEZ MEDINA		

Answers

1.

Figure 1

- (a) $I = (1.3286 - j0.60051) \text{ A}$
- (b) $V_R = (66.4284 - j30.0256) \text{ V}$
- (c) $V_L = (15.8471 + j35.0601) \text{ V}$
- (d) $V_C = (-2.2756 - j5.0345) \text{ V}$
- (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) $V_{R1} = (78.785 + j6.86461) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (1.215 - j6.8646) \text{ V}$
- (c) $I_{R1} = (1.5757 + j0.13729) \text{ A}$
- (d) $I_{R2} = (0.0243 - j0.13729) \text{ A}$
- (e) $I_L = (-0.26013 - j0.04604) \text{ A}$
- (f) $I_C = (1.8115 + j0.32062) \text{ A}$
- (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) $i_{R2}(0.08) = -0.092682 \text{ A}$
- (l) $i_L(0.08) = 0.32975 \text{ A}$
- (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. Fundamentals	Registration #	12666518
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	SAMUEL ROSAS GONZALEZ		

Answers

1.

Figure 1

- (a) $I = (0.75787 - j0.42837) \text{ A}$
- (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) $i(0.05) = 0.13988 \text{ A}$
- (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) $V_{R1} = (49.7007 + j2.71914) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (0.29933 - j2.7191) \text{ V}$
- (c) $I_{R1} = (0.99401 + j0.054383) \text{ A}$
- (d) $I_{R2} = (0.0059867 - j0.054383) \text{ A}$
- (e) $I_L = (-0.088319 - j0.0097225) \text{ A}$
- (f) $I_C = (1.0763 + j0.11849) \text{ A}$
- (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) $i_{R2}(0.05) = -0.057244 \text{ A}$
- (l) $i_L(0.05) = -0.084539 \text{ A}$
- (m) $i_C(0.05) = 1.0303 \text{ A}$

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. Fundamentals	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) $V_L = (6.31304 + j27.6403) \text{ V}$
- (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) $V_{R2} = V_L = V_C = (3.01671 - j11.254) \text{ V}$
- (c) $I_{R1} = (1.2426 + j0.16077) \text{ A}$
- (d) $I_{R2} = (0.043096 - j0.16077) \text{ A}$
- (e) $I_L = (-0.49753 - j0.13337) \text{ A}$
- (f) $I_C = (1.6971 + j0.45491) \text{ A}$
- (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) $i_{R2}(0.09) = -0.12822 \text{ A}$
- (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. Fundamentals	Registration #	11126870
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JUAN GAEL GONZALEZ RODRIGUEZ		

Answers

1.

Figure 1

- (a) $I = (0.99056 - j0.71037) \text{ A}$
- (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) $V_{R1} = (89.7316 + j3.46527) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (0.26845 - j3.4653) \text{ V}$
- (c) $I_{R1} = (1.4955 + j0.057754) \text{ A}$
- (d) $I_{R2} = (0.0044741 - j0.057754) \text{ A}$
- (e) $I_L = (-0.076599 - j0.005934) \text{ A}$
- (f) $I_C = (1.5677 + j0.12144) \text{ A}$
- (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) $i_{R2}(0.09) = 0.069797 \text{ A}$
- (l) $i_L(0.09) = -0.056884 \text{ A}$
- (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. Fundamentals	Registration #	14155580
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	LUIS ALEJANDRO URBINA GONZALEZ		

Answers

1.

Figure 1

- (a) $I = (0.66488 - j0.034489) \text{ A}$
- (b) $V_R = (39.8927 - j2.06933) \text{ V}$
- (c) $V_L = (0.30338 + j5.8486) \text{ V}$
- (d) $V_C = (-0.19604 - j3.7792) \text{ V}$
- (e) $v(0.04) = -33.2502 \text{ V}$
- (f) $i(0.04) = -0.59214 \text{ A}$
- (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) $V_{R1} = (35.5429 + j8.32323) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (4.4571 - j8.3232) \text{ V}$
- (c) $I_{R1} = (0.59238 + j0.13872) \text{ A}$
- (d) $I_{R2} = (0.074285 - j0.13872) \text{ A}$
- (e) $I_L = (-0.9462 - j0.50669) \text{ A}$
- (f) $I_C = (1.4643 + j0.78413) \text{ A}$
- (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) $i_{R1}(0.04) = -0.33371 \text{ A}$
- (k) $i_{R2}(0.04) = -0.22046 \text{ A}$
- (l) $i_L(0.04) = 0.20682 \text{ A}$
- (m) $i_C(0.04) = -0.32006 \text{ A}$

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. Fundamentals	Registration #	14629184
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JOSE WALDO QUINTANA ARANDA		

Answers

1.

Figure 1

- (a) $I = (0.74618 - j0.20039) \text{ A}$
- (b) $V_R = (37.3092 - j10.0196) \text{ V}$
- (c) $V_L = (3.39958 + j12.6587) \text{ V}$
- (d) $V_C = (-0.70874 - j2.6391) \text{ V}$
- (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) $V_{R1} = (39.3809 + j3.46401) \text{ V}$
- (b) $V_{R2} = V_L = V_C = (0.61913 - j3.464) \text{ V}$
- (c) $I_{R1} = (0.78762 + j0.06928) \text{ A}$
- (d) $I_{R2} = (0.012383 - j0.06928) \text{ A}$
- (e) $I_L = (-0.20419 - j0.036496) \text{ A}$
- (f) $I_C = (0.97942 + j0.17506) \text{ A}$
- (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) $i_{R1}(0.04) = -0.097977 \text{ A}$
- (k) $i_{R2}(0.04) = 0.097977 \text{ A}$
- (l) $i_L(0.04) = 0.051613 \text{ A}$
- (m) $i_C(0.04) = -0.24757 \text{ A}$

2. (a) a