



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. (a) Figure 1

- $I = (1.0113 - j0.49131) \text{ A}$
- $V_R = (40.4527 - j19.6523) \text{ V}$
- $V_L = (13.8914 + j28.5943) \text{ V}$
- $V_C = (-4.3441 - j8.942) \text{ V}$
- $v(0.05) = -1.7328 \times 10^{-13} \text{ V}$
- $i(0.05) = 0.69481 \text{ A}$
- $v_R(0.05) = 27.7926 \text{ V}$
- $v_L(0.05) = -40.4385 \text{ V}$
- $v_C(0.05) = 12.6459 \text{ V}$

(b) Figure 2

- $V_{R1} = (42.6831 + j11.3748) \text{ V}$
- $V_{R2} = V_L = V_C = (7.31689 - j11.3748) \text{ V}$
- $I_{R1} = (1.0671 + j0.28437) \text{ A}$
- $I_{R2} = (0.18292 - j0.28437) \text{ A}$
- $I_L = (-0.4023 - j0.25878) \text{ A}$
- $I_C = (1.2865 + j0.82752) \text{ A}$

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 #	14121732
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JOEL GERARDO AGUERO LLANAS		

Answers

1. (a) Figure 1

- $I = (1.3979 + j0.054606) \text{ A}$
- $V_R = (69.8933 + j2.73028) \text{ V}$
- $V_L = (-0.617576 + j15.8095) \text{ V}$
- $V_C = (0.72423 - j18.5398) \text{ V}$
- $v(0.07) = 58.1878 \text{ V}$
- $i(0.07) = 1.0995 \text{ A}$
- $v_R(0.07) = 54.9753 \text{ V}$
- $v_L(0.07) = -18.6014 \text{ V}$
- $v_C(0.07) = 21.8138 \text{ V}$

(b) Figure 2

- $V_{R1} = (38.3536 - j10.3019) \text{ V}$
- $V_{R2} = V_L = V_C = (31.6464 + j10.3019) \text{ V}$
- $I_{R1} = (0.76707 - j0.20604) \text{ A}$
- $I_{R2} = (0.63293 + j0.20604) \text{ A}$
- $I_L = (0.91088 - j2.7982) \text{ A}$
- $I_C = (-0.77674 + j2.3861) \text{ A}$

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 #	14124427
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JERSON CHAVEZ ORTIZ		

Answers

1. (a) Figure 1

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

(b) Figure 2

- $V_{R1} = (36.5572 - j7.21644) \text{ V}$
- $V_{R2} = V_L = V_C = (33.4428 + j7.21644) \text{ V}$
- $I_{R1} = (0.60929 - j0.12027) \text{ A}$
- $I_{R2} = (0.55738 + j0.12027) \text{ A}$
- $I_L = (1.2761 - j5.914) \text{ A}$
- $I_C = (-1.2242 + j5.6734) \text{ A}$

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 #	14156040
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	LUIS ANTONIO FERNENDEZ CARRASCO		

Answers

1. (a) Figure 1

- $I = (0.68877 - j0.20537) \text{ A}$
- $V_R = (55.1013 - j16.4294) \text{ V}$
- $V_L = (5.80663 + j19.4744) \text{ V}$
- $V_C = (-0.90792 - j3.045) \text{ V}$
- $v(0.06) = 80.6998 \text{ V}$
- $i(0.06) = 1.0161 \text{ A}$
- $v_R(0.06) = 81.291 \text{ V}$
- $v_L(0.06) = -0.70073 \text{ V}$
- $v_C(0.06) = 0.10957 \text{ V}$

(b) Figure 2

- $V_{R1} = (59.4938 + j3.86395) \text{ V}$
- $V_{R2} = V_L = V_C = (0.50621 - j3.8639) \text{ V}$
- $I_{R1} = (0.74367 + j0.048299) \text{ A}$
- $I_{R2} = (0.0063276 - j0.048299) \text{ A}$
- $I_L = (-0.13666 - j0.017904) \text{ A}$
- $I_C = (0.874 + j0.1145) \text{ A}$

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 #	14156037
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	MICHAEL MURILLO MENDEZ		

Answers

1. (a) Figure 1

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

(b) Figure 2

- $V_{R1} = (19.9327 + j0.817561) \text{ V}$
- $V_{R2} = V_L = V_C = (0.067293 - j0.81756) \text{ V}$
- $I_{R1} = (0.22147 + j0.009084) \text{ A}$
- $I_{R2} = (0.00074771 - j0.009084) \text{ A}$
- $I_L = (-0.030981 - j0.00255) \text{ A}$
- $I_C = (0.25171 + j0.020718) \text{ A}$

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 #	11073892
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JOSUE AMADOR SIFUENTES		

Answers

1. (a) Figure 1

- $I = (0.39895 - j0.13472) \text{ A}$
- $V_R = (35.9055 - j12.125) \text{ V}$
- $V_L = (4.57103 + j13.536) \text{ V}$
- $V_C = (-0.47648 - j1.411) \text{ V}$
- $v(0.04) = -53.7999 \text{ V}$
- $i(0.04) = -0.59546 \text{ A}$
- $v_R(0.04) = -53.5916 \text{ V}$
- $v_L(0.04) = -0.23256 \text{ V}$
- $v_C(0.04) = 0.024242 \text{ V}$

(b) Figure 2

- $V_{R1} = (39.8472 + j1.74142) \text{ V}$
- $V_{R2} = V_L = V_C = (0.15279 - j1.7414) \text{ V}$
- $I_{R1} = (0.44275 + j0.019349) \text{ A}$
- $I_{R2} = (0.0016977 - j0.019349) \text{ A}$
- $I_L = (-0.051325 - j0.0045033) \text{ A}$
- $I_C = (0.49237 + j0.043201) \text{ A}$

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 #	11268436
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	EDUARDO ZALDIVAR MARTINEZ		

Answers

1. (a) Figure 1

- $I = (0.713\,04 + j0.029\,858)\text{ A}$
- $V_R = (49.9125 + j2.090\,05)\text{ V}$
- $V_L = (-0.150\,08 + j3.5841)\text{ V}$
- $V_C = (0.2376 - j5.6742)\text{ V}$
- $v(0.05) = -41.5627\text{ V}$
- $i(0.05) = -0.626\,87\text{ A}$
- $v_R(0.05) = -43.8812\text{ V}$
- $v_L(0.05) = -3.9759\text{ V}$
- $v_C(0.05) = 6.2944\text{ V}$

(b) Figure 2

- $V_{R1} = (46.7011 - j8.461\,12)\text{ V}$
- $V_{R2} = V_L = V_C = (3.2989 + j8.4611)\text{ V}$
- $I_{R1} = (0.667\,16 - j0.120\,87)\text{ A}$
- $I_{R2} = (0.047\,128 + j0.120\,87)\text{ A}$
- $I_L = (1.6833 - j0.6563)\text{ A}$
- $I_C = (-1.0633 + j0.414\,56)\text{ A}$

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 #	14140390
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	LUIS DAVID MARENTES REYES		

Answers

1. (a) Figure 1

- $I = (0.776\ 12 - j0.277\ 02)\text{ A}$
- $V_R = (62.0898 - j22.1617)\text{ V}$
- $V_L = (9.747\ 23 + j27.3085)\text{ V}$
- $V_C = (-1.8371 - j5.1468)\text{ V}$
- $v(0.07) = 58.1878\text{ V}$
- $i(0.07) = 0.9621\text{ A}$
- $v_R(0.07) = 76.9681\text{ V}$
- $v_L(0.07) = -23.1419\text{ V}$
- $v_C(0.07) = 4.3615\text{ V}$

(b) Figure 2

- $V_{R1} = (68.5978 + j6.863\ 65)\text{ V}$
- $V_{R2} = V_L = V_C = (1.4022 - j6.8637)\text{ V}$
- $I_{R1} = (0.857\ 47 + j0.085\ 796)\text{ A}$
- $I_{R2} = (0.017\ 527 - j0.085\ 796)\text{ A}$
- $I_L = (-0.195\ 07 - j0.039\ 85)\text{ A}$
- $I_C = (1.035 + j0.211\ 44)\text{ A}$

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 #	12068799
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JESUS ANTONIO ROBLESREYES		

Answers

1. (a) Figure 1

- i. $I = (1.363 + j0.22453) \text{ A}$
- ii. $V_R = (68.1507 + j11.2263) \text{ V}$
- iii. $V_L = (-1.1286 + j6.8513) \text{ V}$
- iv. $V_C = (2.97786 - j18.0775) \text{ V}$
- v. $v(0.07) = -4.8494 \times 10^{-14} \text{ V}$
- vi. $i(0.07) = 0.31753 \text{ A}$
- vii. $v_R(0.07) = 15.8764 \text{ V}$
- viii. $v_L(0.07) = 9.6891 \text{ V}$
- ix. $v_C(0.07) = -25.5655 \text{ V}$

(b) Figure 2

- i. $V_{R1} = (66.6792 - j10.2567) \text{ V}$
- ii. $V_{R2} = V_L = V_C = (3.32079 + j10.2567) \text{ V}$
- iii. $I_{R1} = (1.3336 - j0.20513) \text{ A}$
- iv. $I_{R2} = (0.066416 + j0.20513) \text{ A}$
- v. $I_L = (2.0405 - j0.66065) \text{ A}$
- vi. $I_C = (-0.77334 + j0.25038) \text{ A}$

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 #	14150725
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	LILIANA VERA GLZ		

Answers

1. (a) Figure 1

- $I = (2.9615 - j0.33777) \text{ A}$
- $V_R = (88.8443 - j10.1331) \text{ V}$
- $V_L = (3.39564 + j29.772) \text{ V}$
- $V_C = (-2.23991 - j19.6389) \text{ V}$
- $v(0.09) = -6.2349 \times 10^{-14} \text{ V}$
- $i(0.09) = -0.47768 \text{ A}$
- $v_R(0.09) = -14.3304 \text{ V}$
- $v_L(0.09) = 42.104 \text{ V}$
- $v_C(0.09) = -27.7736 \text{ V}$

(b) Figure 2

- $V_{R1} = (61.7461 + j21.7518) \text{ V}$
- $V_{R2} = V_L = V_C = (28.2539 - j21.7518) \text{ V}$
- $I_{R1} = (2.0582 + j0.72506) \text{ A}$
- $I_{R2} = (0.9418 - j0.72506) \text{ A}$
- $I_L = (-2.1637 - j2.8105) \text{ A}$
- $I_C = (3.2801 + j4.2606) \text{ A}$

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 #	14125016
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	DAVID OTHONIEL SALDIVAR PEREZ		

Answers

1. (a) Figure 1

- $I = (1.4799 - j0.52578) \text{ A}$
- $V_R = (44.3959 - j15.7734) \text{ V}$
- $V_L = (7.92856 + j22.3158) \text{ V}$
- $V_C = (-2.3245 - j6.5424) \text{ V}$
- $v(0.05) = -67.2499 \text{ V}$
- $i(0.05) = -2.2202 \text{ A}$
- $v_R(0.05) = -66.6056 \text{ V}$
- $v_L(0.05) = -0.91153 \text{ V}$
- $v_C(0.05) = 0.26724 \text{ V}$

(b) Figure 2

- $V_{R1} = (46.297 + j8.88042) \text{ V}$
- $V_{R2} = V_L = V_C = (3.703 - j8.8804) \text{ V}$
- $I_{R1} = (1.5432 + j0.29601) \text{ A}$
- $I_{R2} = (0.12343 - j0.29601) \text{ A}$
- $I_L = (-0.5889 - j0.24556) \text{ A}$
- $I_C = (2.0087 + j0.83759) \text{ A}$

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. (a) Figure 1

- $I = (1.3286 - j0.60051) \text{ A}$
- $V_R = (66.4284 - j30.0256) \text{ V}$
- $V_L = (15.8471 + j35.0601) \text{ V}$
- $V_C = (-2.2756 - j5.0345) \text{ V}$
- $v(0.08) = -107.5998 \text{ V}$
- $i(0.08) = -2.0494 \text{ A}$
- $v_R(0.08) = -102.4677 \text{ V}$
- $v_L(0.08) = -5.9925 \text{ V}$
- $v_C(0.08) = 0.8605 \text{ V}$

(b) Figure 2

- $V_{R1} = (78.785 + j6.86461) \text{ V}$
- $V_{R2} = V_L = V_C = (1.215 - j6.8646) \text{ V}$
- $I_{R1} = (1.5757 + j0.13729) \text{ A}$
- $I_{R2} = (0.0243 - j0.13729) \text{ A}$
- $I_L = (-0.26013 - j0.04604) \text{ A}$
- $I_C = (1.8115 + j0.32062) \text{ A}$

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. (a) Figure 1

- $I = (0.75787 - j0.42837) \text{ A}$
- $V_R = (37.8937 - j21.4185) \text{ V}$
- $V_L = (13.1885 + j23.3331) \text{ V}$
- $V_C = (-1.0822 - j1.9146) \text{ V}$
- $v(0.05) = 41.5627 \text{ V}$
- $i(0.05) = 0.13988 \text{ A}$
- $v_R(0.05) = 6.9938 \text{ V}$
- $v_L(0.05) = 37.6589 \text{ V}$
- $v_C(0.05) = -3.0901 \text{ V}$

(b) Figure 2

- $V_{R1} = (49.7007 + j2.71914) \text{ V}$
- $V_{R2} = V_L = V_C = (0.29933 - j2.7191) \text{ V}$
- $I_{R1} = (0.99401 + j0.054383) \text{ A}$
- $I_{R2} = (0.0059867 - j0.054383) \text{ A}$
- $I_L = (-0.088319 - j0.0097225) \text{ A}$
- $I_C = (1.0763 + j0.11849) \text{ A}$

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. (a) Figure 1

- $I = (1.222 - j0.2791) \text{ A}$
- $V_R = (85.5378 - j19.5368) \text{ V}$
- $V_L = (6.31304 + j27.6403) \text{ V}$
- $V_C = (-1.8508 - j8.1034) \text{ V}$
- $v(0.09) = -121.0497 \text{ V}$
- $i(0.09) = -1.7655 \text{ A}$
- $v_R(0.09) = -123.586 \text{ V}$
- $v_L(0.09) = 3.5882 \text{ V}$
- $v_C(0.09) = -1.052 \text{ V}$

(b) Figure 2

- $V_{R1} = (86.9833 + j11.254) \text{ V}$
- $V_{R2} = V_L = V_C = (3.01671 - j11.254) \text{ V}$
- $I_{R1} = (1.2426 + j0.16077) \text{ A}$
- $I_{R2} = (0.043096 - j0.16077) \text{ A}$
- $I_L = (-0.49753 - j0.13337) \text{ A}$
- $I_C = (1.6971 + j0.45491) \text{ A}$

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. (a) Figure 1

- $I = (0.99056 - j0.71037) \text{ A}$
- $V_R = (59.4338 - j42.6224) \text{ V}$
- $V_L = (32.1365 + j44.812) \text{ V}$
- $V_C = (-1.5703 - j2.1896) \text{ V}$
- $v(0.09) = 74.8128 \text{ V}$
- $i(0.09) = 1.6362 \text{ A}$
- $v_R(0.09) = 98.1698 \text{ V}$
- $v_L(0.09) = -24.5568 \text{ V}$
- $v_C(0.09) = 1.1999 \text{ V}$

(b) Figure 2

- $V_{R1} = (89.7316 + j3.46527) \text{ V}$
- $V_{R2} = V_L = V_C = (0.26845 - j3.4653) \text{ V}$
- $I_{R1} = (1.4955 + j0.057754) \text{ A}$
- $I_{R2} = (0.0044741 - j0.057754) \text{ A}$
- $I_L = (-0.076599 - j0.005934) \text{ A}$
- $I_C = (1.5677 + j0.12144) \text{ A}$

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. (a) Figure 1

- $I = (0.66488 - j0.034489) \text{ A}$
- $V_R = (39.8927 - j2.06933) \text{ V}$
- $V_L = (0.30338 + j5.8486) \text{ V}$
- $V_C = (-0.19604 - j3.7792) \text{ V}$
- $v(0.04) = -33.2502 \text{ V}$
- $i(0.04) = -0.59214 \text{ A}$
- $v_R(0.04) = -35.5285 \text{ V}$
- $v_L(0.04) = 6.4393 \text{ V}$
- $v_C(0.04) = -4.161 \text{ V}$

(b) Figure 2

- $V_{R1} = (35.5429 + j8.32323) \text{ V}$
- $V_{R2} = V_L = V_C = (4.4571 - j8.3232) \text{ V}$
- $I_{R1} = (0.59238 + j0.13872) \text{ A}$
- $I_{R2} = (0.074285 - j0.13872) \text{ A}$
- $I_L = (-0.9462 - j0.50669) \text{ A}$
- $I_C = (1.4643 + j0.78413) \text{ A}$

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. (a) Figure 1

- $I = (0.746\ 18 - j0.200\ 39)\text{ A}$
- $V_R = (37.3092 - j10.0196)\text{ V}$
- $V_L = (3.399\ 58 + j12.6587)\text{ V}$
- $V_C = (-0.708\ 74 - j2.6391)\text{ V}$
- $v(0.04) = -1.3862 \times 10^{-13}\text{ V}$
- $i(0.04) = 0.2834\text{ A}$
- $v_R(0.04) = 14.1699\text{ V}$
- $v_L(0.04) = -17.9021\text{ V}$
- $v_C(0.04) = 3.7322\text{ V}$

(b) Figure 2

- $V_{R1} = (39.3809 + j3.464\ 01)\text{ V}$
- $V_{R2} = V_L = V_C = (0.619\ 13 - j3.464)\text{ V}$
- $I_{R1} = (0.787\ 62 + j0.069\ 28)\text{ A}$
- $I_{R2} = (0.012\ 383 - j0.069\ 28)\text{ A}$
- $I_L = (-0.204\ 19 - j0.036\ 496)\text{ A}$
- $I_C = (0.979\ 42 + j0.175\ 06)\text{ A}$

2. (a) a