



Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	12127844
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JUAN MIGUEL BARRIENTOS GARCIA		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{2, 5, 5, 5, 3, 4, 4, 6, 6, 4, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 8x(k) - x(k-1) - \frac{1}{4}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{4}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 3z + 8}{9z^2 + 2z + 9}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.5z^3 + 0.05z^2 + 0.5z - 0.003$$



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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	12132791
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	ISRAEL GONZALEZ		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{3, 8, 4, 5, 2, 6, 9, 5, 6, 4, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 5x(k) - x(k-1) - \frac{1}{2}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{4}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 2z + 2}{3z^2 + 3z + 4}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.8z^3 + 0.04z^2 + 0.5z - 0.002$$



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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	10062268
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<i>JULIO ALEJANDRO MARIN GARCIA</i>		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{5, 7, 4, 2, 2, 8, 5, 8, 7, 2, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 6x(k) - x(k-1) - \frac{1}{9}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{2}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 2z + 6}{7z^2 + 9z + 4}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.7z^3 + 0.04z^2 + 0.2z - 0.002$$



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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	98017052
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	LUIZ EDUARDO		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{4, 5, 7, 5, 3, 5, 9, 9, 9, 7, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 6x(k) - x(k-1) - \frac{1}{6}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{7}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 9z + 9}{2z^2 + 5z + 9}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.5z^3 + 0.07z^2 + 0.5z - 0.003$$



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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	12125213
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	EMMANUEL ALEJANDRO		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{9, 7, 8, 9, 7, 3, 2, 6, 3, 2, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 4x(k) - x(k-1) - \frac{1}{8}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{2}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 7z + 8}{7z^2 + 9z + 8}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.7z^3 + 0.08z^2 + 0.9z - 0.007$$



Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	12146394
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JOSELY ROSALES		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{4, 8, 4, 3, 8, 7, 9, 9, 8, 8, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 5x(k) - x(k-1) - \frac{1}{5}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{8}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 3z + 6}{6z^2 + 2z + 5}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.8z^3 + 0.04z^2 + 0.3z - 0.008$$



Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	12146385
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	RODRIGUEZ PEREZ RODOLFO		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{9, 9, 8, 6, 8, 4, 5, 3, 3, 5, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 4x(k) - x(k-1) - \frac{1}{4}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{5}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 2z + 8}{9z^2 + 9z + 3}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.9z^3 + 0.08z^2 + 0.6z - 0.008$$



Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	10056986
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	ARTURO CORDERO ROBLES		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{8, 6, 5, 7, 3, 2, 4, 9, 8, 2, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 8x(k) - x(k-1) - \frac{1}{5}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{2}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 5z + 4}{2z^2 + 6z + 8}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.6z^3 + 0.05z^2 + 0.7z - 0.003$$



Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	12157333
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	EDGAR RICARDO CHAIREZ VILLARRIAL		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{2, 5, 8, 8, 9, 6, 4, 9, 8, 2, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 3x(k) - x(k-1) - \frac{1}{4}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{2}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 6z + 6}{3z^2 + 8z + 7}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.5z^3 + 0.08z^2 + 0.8z - 0.009$$



Universidad Autónoma de Coahuila

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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	12142724
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	ALLISON DANIELA MACIAS HERNANDEZ		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{6, 4, 5, 3, 9, 6, 9, 5, 4, 9, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 5x(k) - x(k-1) - \frac{1}{8}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{9}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 9z + 6}{9z^2 + 5z + 4}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.4z^3 + 0.05z^2 + 0.3z - 0.009$$



Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	10068360
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	KIM EDUARDO SANCHEZ REYES		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{3, 6, 9, 6, 8, 6, 6, 5, 9, 5, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 9x(k) - x(k-1) - \frac{1}{2}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{5}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 5z + 2}{8z^2 + 4z + 8}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.6z^3 + 0.09z^2 + 0.6z - 0.008$$



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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	11288180
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JORGE ANTONIO MOLINA RAMIREZ		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{4, 6, 8, 8, 7, 7, 2, 4, 8, 3, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 6x(k) - x(k-1) - \frac{1}{5}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{3}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 3z + 5}{8z^2 + 4z + 9}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.6z^3 + 0.08z^2 + 0.8z - 0.007$$



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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	10053330
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	JOSE FERNANDO AGUILAR COLORADO		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{5, 3, 7, 6, 8, 3, 4, 3, 3, 4, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 9x(k) - x(k-1) - \frac{1}{6}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{4}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 8z + 9}{2z^2 + 8z + 5}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.3z^3 + 0.07z^2 + 0.6z - 0.008$$



Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	10073388
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	AXEL JAVIER RODRIGUEZ MARIN		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{6, 9, 6, 3, 7, 6, 6, 2, 7, 7, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 6x(k) - x(k-1) - \frac{1}{4}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{7}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 7z + 8}{2z^2 + 7z + 3}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.9z^3 + 0.06z^2 + 0.3z - 0.007$$



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Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	30/11/2016
Exam / Homework	Exam 3	Registration #	6052185
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	ROGELIO CASTILLO REYES		

Instructions

1. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Find the Z-transform of the function $u(k) = \{2, 7, 6, 9, 2, 7, 4, 3, 7, 7, 0, 0, 0\}$. (2 points)
2. Apply Z-transform to the following equation. (2 points)

$$y(k) = 9x(k) - x(k-1) - \frac{1}{8}y(k-1)$$

3. Find the inverse Z-transform of the following function. (2 points)

$$F(z) = \frac{7}{1 - z^{-1}}$$

4. Draw block diagram for the following transfer function. (2 points)

$$\frac{y(z)}{x(z)} = \frac{z^2 + 4z + 4}{3z^2 + 4z + 5}$$

5. Determine the stability of the following system with the help of Jury's test. (2 points)

$$F(z) = z^4 - 1.7z^3 + 0.06z^2 + 0.9z - 0.002$$