Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***9132341***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***EDGAR CERDA PEREZ***		

Instructions

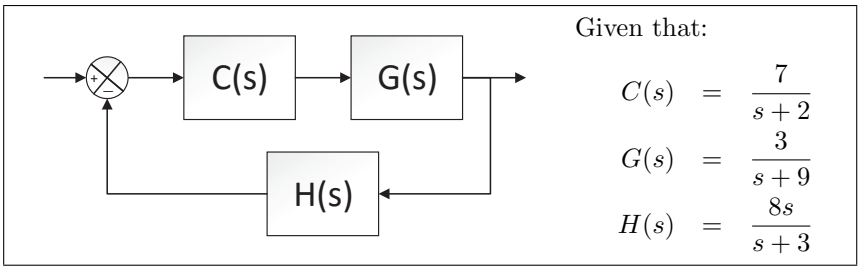
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^7 + 4)e^{5t} - e^{-7t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

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Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***8053323***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JUAN PABLO DUARTE MONSIVAIS***		

Instructions

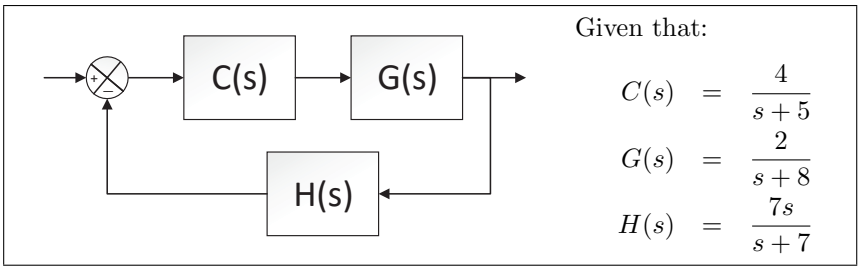
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^2 + 8)e^{3t} - e^{-6t}\cos(t) - t\cos(5t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

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Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12127844***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JUAN MIGUEL BARRIENTOS GARCIA***		

Instructions

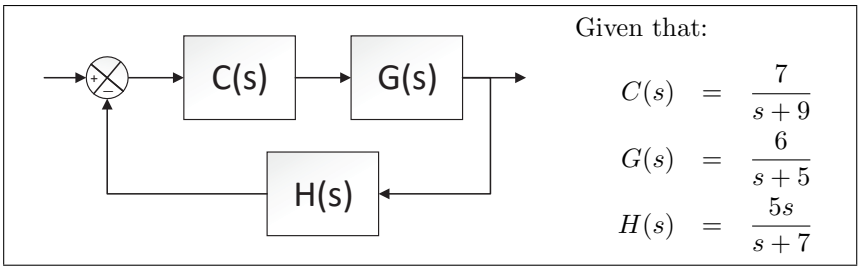
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^5 + 2)e^{7t} - e^{-8t}\cos(t) - t\cos(5t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12132791***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***ISRAEL GONZALEZ***		

Instructions

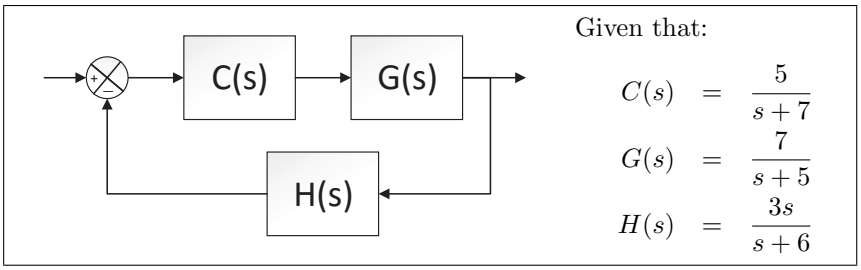
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^3 + 3)e^{7t} - e^{-6t}\cos(t) - t\cos(5t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

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Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***10062268***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JULIO ALEJANDRO MARIN GARCIA***		

Instructions

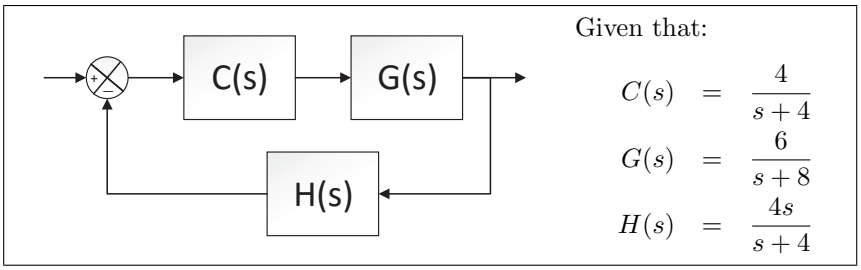
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^6 + 4)e^{7t} - e^{-9t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

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Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***7050612***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***BEATRIZ ELIZABETH ALBA PEREZ***		

Instructions

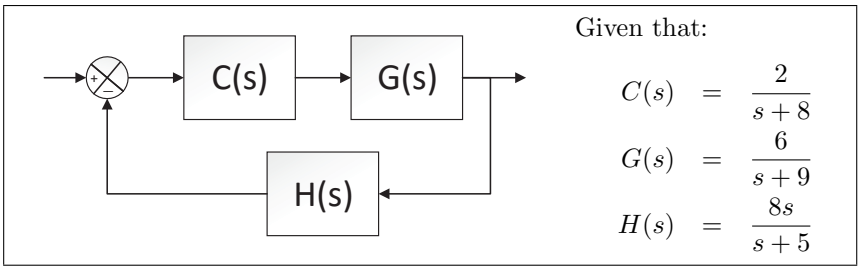
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^6 + 4)e^{9t} - e^{-3t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

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Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***98017052***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***LUIZ EDUARDO***		

Instructions

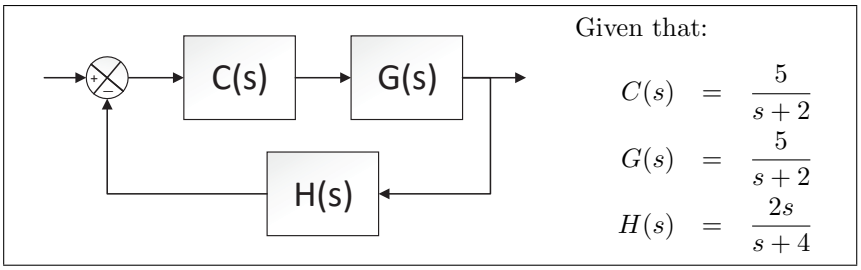
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^6 + 3)e^{4t} - e^{-7t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

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Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12125213***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***EMMANUEL ALEJANDRO***		

Instructions

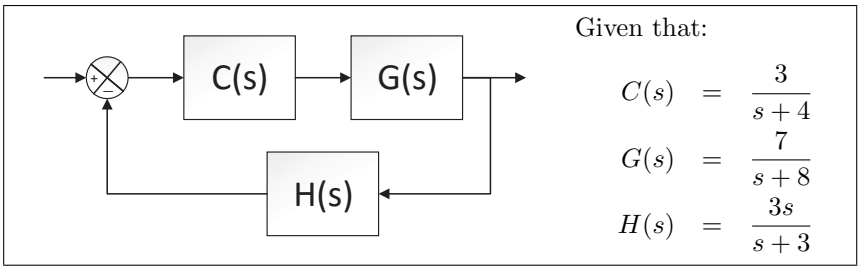
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^8 + 3)e^{9t} - e^{-3t}\cos(t) - t\cos(4t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12146394***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JOSELY ROSALES***		

Instructions

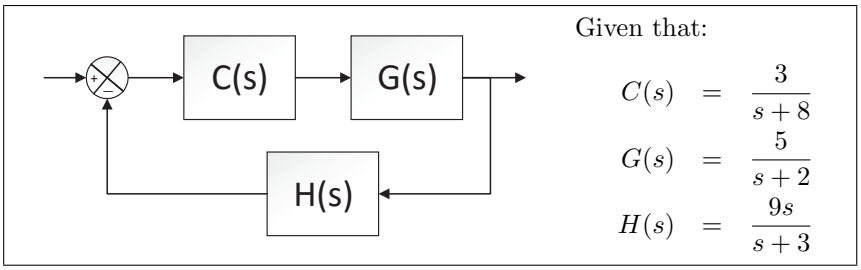
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^5 + 4)e^{3t} - e^{-2t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12133449***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***MARIO ALBERTO GAMEZ ROQUE***		

Instructions

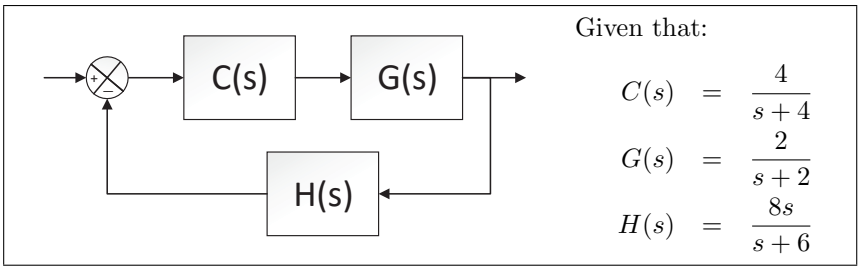
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^3 + 2)e^{4t} - e^{-8t}\cos(t) - t\cos(7t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12146385***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***RODRIGUEZ PEREZ RODOLFO***		

Instructions

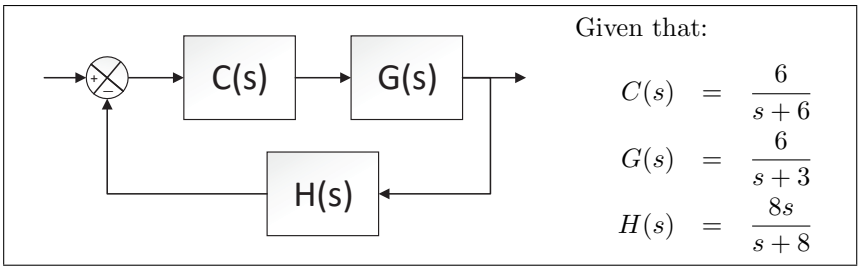
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^8 + 8)e^{5t} - e^{-3t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***10056986***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***ARTURO CORDERO ROBLES***		

Instructions

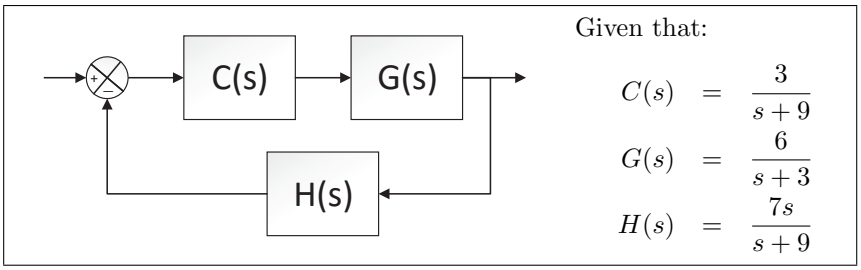
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^4 + 9)e^{6t} - e^{-7t}\cos(t) - t\cos(2t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12128743***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***GIBRAM ALFONSO HERNANDEZ MARTINEZ***		

Instructions

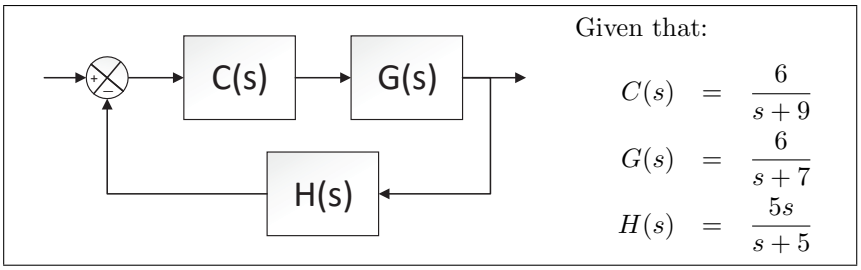
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^9 + 7)e^{8t} - e^{-6t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12157333***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***EDGAR RICARDO CHAIREZ VILLARRIAL***		

Instructions

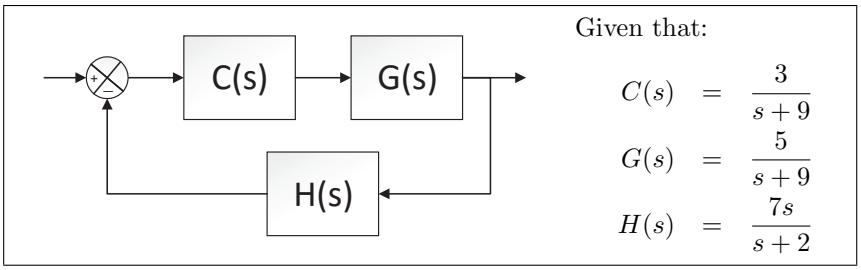
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^3 + 4)e^{7t} - e^{-8t}\cos(t) - t\cos(4t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12154267***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JOSE FRANCISCO TOVAR JARAMILLO–***		

Instructions

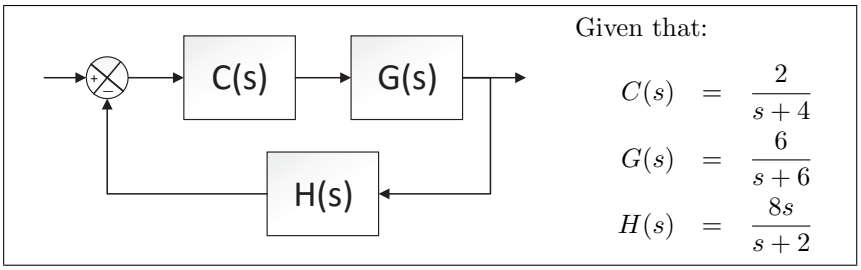
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^2 + 9)e^{4t} - e^{-9t}\cos(t) - t\cos(2t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

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Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12142724***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***ALLISON DANIELA MACIAS HERNANDEZ***		

Instructions

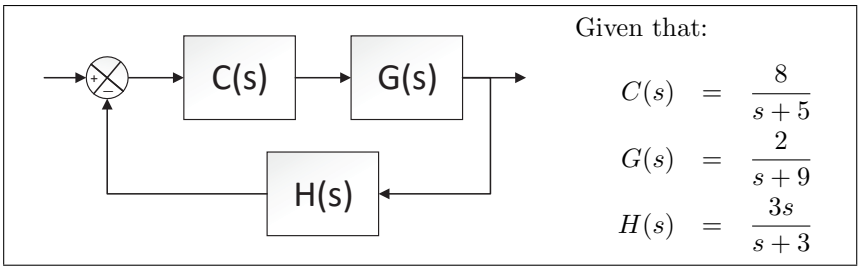
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^8 + 6)e^{7t} - e^{-4t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***10068360***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***KIM EDUARDO SANCHEZ REYES***		

Instructions

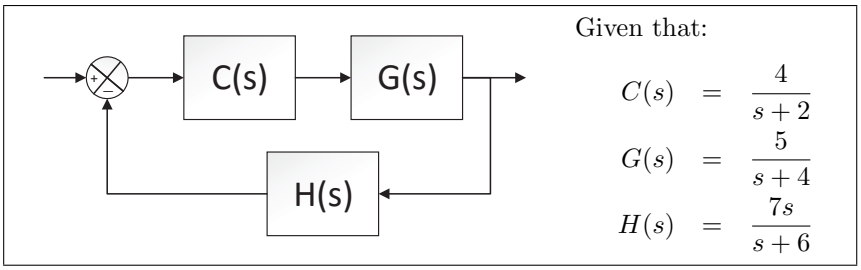
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^9 + 2)e^{8t} - e^{-8t}\cos(t) - t\cos(8t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***11288180***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JORGE ANTONIO MOLINA RAMIREZ***		

Instructions

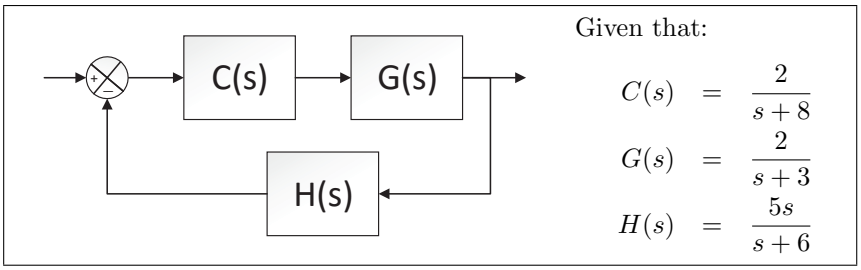
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^6 + 9)e^{6t} - e^{-8t}\cos(t) - t\cos(6t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***12139200***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***CARLOS RODOLFO MENA MONTES***		

Instructions

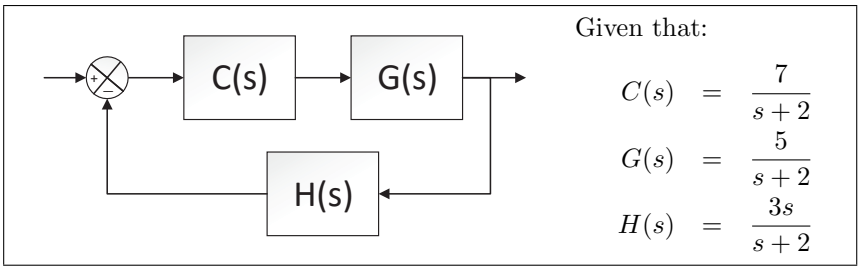
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^5 + 6)e^{5t} - e^{-2t}\cos(t) - t\cos(9t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***10053330***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***JOSE FERNANDO AGUILAR COLORADO***		

Instructions

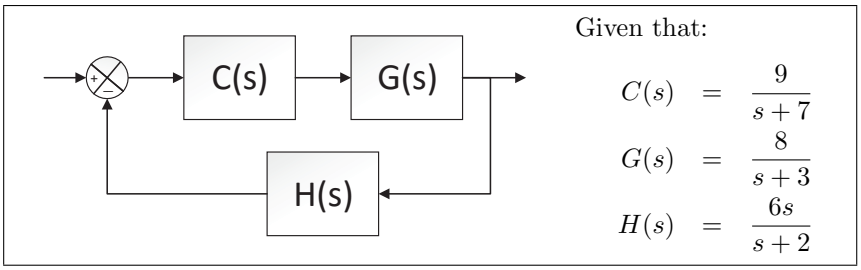
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^4 + 6)e^{5t} - e^{-7t}\cos(t) - t\cos(3t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***5113606***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***OBDULIA CASTANEDA PEREZ***		

Instructions

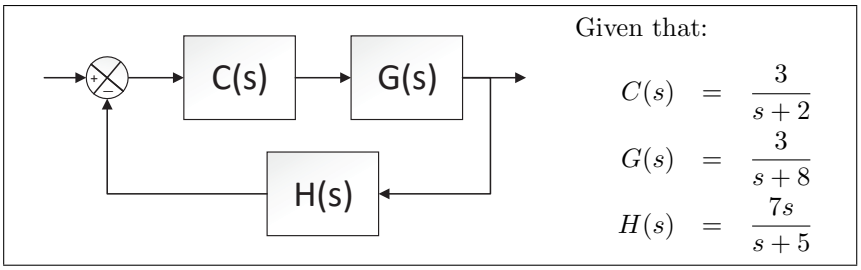
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^7 + 6)e^{7t} - e^{-7t}\cos(t) - t\cos(6t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)

Universidad Autónoma de Coahuila

Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Digital control	Group	9A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Continuous-time control theory	Registration #	***10073388***
Professor's name	Suresh Kumar Gadi	Marks Obtained	_____ / 10
Student's name	***AXEL JAVIER RODRIGUEZ MARIN***		

Instructions

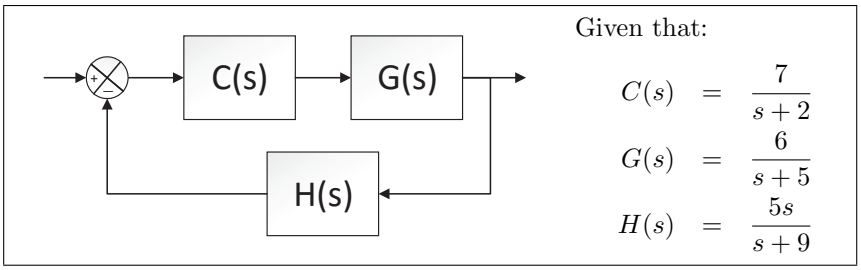
1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
4. 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 Laplace transformation for the following function. (2 points)

$$f(t) = (t^2 + 3)e^{9t} - e^{-4t}\cos(t) - t\cos(3t)$$

2. Simplify the following block diagram. (2 points)



3. Find analytically the impulse and step response for the above system. (2 points)
4. Plot the above responses. (2 points)
5. Find the stability for the above system with the help of the Routh–Hurwitz stability criterion. (2 points)