Forma, Círculo

Descripción generada automáticamenteUNIVERSIDAD TECNOLÓGICA DE PANAMÁ

FACULTAD DE INGENIERÍA DE SISTEMAS COMPUTACIONALES

**Practicas 4,5,6,7,8 y9**

**Transformada de Laplace, Transformada Inversa y**

**Ecuaciones Diferenciales**

Matemáticas superiores para ingeniería

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2023

**Practica 4**

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| **Problema 1** |
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| **Problema 3** |
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| **Problema 5** |
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| **Problema 7** |
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| **Problema 9** |
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| **Problema 11** |
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| **Problema 13** |
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| **Problema 15** |
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| **Problema 17** |
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| **Problema 19** |
| *PARA S=-1*  *PARA S=-1*  *PARA S=0*  *PARA S=-2*  *PARA S=1*  *\*(2)*  *PARA S=2* |

**Practica 4 parte 2**

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| **Problema 22** |
| |  |  | | --- | --- | | PARA S=1 | PARA S=0 | |

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| **Problema 24** |
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| **Problema 26** |
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| **Problema 29** |
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| **Problema 30** |
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**Práctica 5- I Parte**

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| **Problema 39** |
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| **Problema 40** |
| **Cambio de variable**  z=t-1  t=z+3  (3t+1)  =3(z+1)+1  =3[(t-1)+1]+1  =3(t-1)+3+1  =3(t-1)+4 |

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| **Problema 41** |
| **Cambio de variable** |

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| **Problema 42** |
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| **Problema 43** |
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| **Problema 45** |
| **) =**  =  =  =  **=** |

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| **Problema 47** |
| A picture containing text, clock, gauge  Description automatically generated |

**Practica 5- III Parte**

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| **Problema 56** |
| Imagen que contiene Diagrama  Descripción generada automáticamente  Gráfica:  Gráfico  Descripción generada automáticamente  Escalón unitario:  Hallar la Transformada de Laplace: |

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| **Problema 57** |
| Gráfico, Gráfico de líneas  Descripción generada automáticamente |

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| **Problema 58** |
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| **Problema 60** |
| Texto  Descripción generada automáticamente con confianza media  Gráfica:  Gráfico, Gráfico de líneas  Descripción generada automáticamente  Escalón unitario:  Hallar la Transformada de Laplace: |

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| **Problema 61** |
| Diagrama  Descripción generada automáticamente |

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| **Problema 62** |
| **Gráfico  Descripción generada automáticamente** |

**Practica 5- IV Parte**

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| **Problema 64** |
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| **Problema 65** |
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| **Problema 66** |
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| **Problema 69** |
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| **Problema 70** |
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**Practica 6- I Parte**

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| **Problema 2** |
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| **Problema 3** |
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| **Problema 4** |
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| **Problema 7** |
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| **Problema 8** |
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**Practica 6 – II Parte**

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| **Problema 9** |
| **+ y = t sen t ; y(0) = 0**    sY(s) – y(0) + Y(s) = -  (s+1) Y(s) =  Y(s) =  = + +  2s = A + (Bs+C)() +(Ds+E)(s+1)  2s = A(+21) + (B+Ds+Es+E  2s = A+2+A+B+B+C+C+ B+B+Bs+Cs+C+D+Ds+Es+E  2s = (A+B) + (B+C) +  A+B=0 B+C=0 2A+B+C+D=0 B+C+D+E=2 A+C+E=0    2A-E = -2 3A+C = -2 A C = 0      4A =-2 B = C = E =1  A= -  A =  D = 1  + + = + +  Y(t) = + +  Y(t) = = + +  Y(t) = = + + +  Y(t) = = + +  Y(t) = = + +  Y(t) = = + +  Y(t) = = + +  Y(t) = = + +  Y(t) = = + +  Y(t) = = + +  Y(t) = = + + +  Y(t) = + + |

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| **Problema 11** |
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| **Problema 12** |
| A=1 B=-1 B+D=0  -1+D=0  A+C=1 D=1  1+C=1  C=0  Fracciones Parciales  =  Integración por partes |

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| **Problema 13** |
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| **Problema 14** |
| C = 0  A = 1  B = -1 |

**Practica 7- I Parte**

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| **Problema 20** |
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| **Problema 22** |
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| **Problema 24** |
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| **Problema 26** |
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| **Problema 28** |
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| **Problema 30** |
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**Practica 7 - II Parte**

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| **Problema 33** |
| Aplicando Fracciones Parciales: |

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| **Problema 34** |
| Puntos críticos  Si s=0  Si s = a  Si s = 2a |

**Practica 7 - III Parte**

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| **Problema 38** |
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| **Problema 40** |
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| **Problema 42** |
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| **Problema 43** |
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| **Problema 45** |
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| **Problema 46** |
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**Practica 8 - I parte**

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| **Problema 49** |
| {-1 , a < t < 2a  - |

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| **Problema 51** |
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| **Problema 52** |
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| **Problema 54** |
| Gráfico  Descripción generada automáticamente |

**Practica 9 – I Parte**

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| **Problema 2** |
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| **Problema 4** |
| Aplicando la inversa y el escalón unitario |

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| **Problema 6** |
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| **Problema 8** |
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| **Problema 10** |
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| **Problema 12** |
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