Started on	Monday, 30 August 2021, 5:41 PM
State	Finished
Completed on	Monday, 30 August 2021, 6:09 PM
Time taken	28 mins 55 secs
Grade	**6.00** out of 10.00 (**60**%)

Question **1**

Correct

Mark 2.00 out of 2.00

$L^{-1}[\frac{s+2}{(s^2+4s+5)^2}] =$

Select one:

a. $\frac{1}{2}e^{-2t}t\ sin\ 2t$

b. $\frac{1}{2}e^{2t}t\ sin\ t$

c. $\frac{1}{2}e^{-2t}t\ sin\ t$ ✔

d. $\frac{1}{2}e^{-2t}t^2\ sin\ t$

Your answer is correct.

The correct answer is: $\frac{1}{2}e^{-2t}t\ sin\ t$

Question **2**

Incorrect

Mark 0.00 out of 2.00

$If\ y\ satisfies\ y''+3y'+2y=e^{-t}\ with\ y(0)=y'(0)=0\ then\ L($

Select one:

a. $\frac{1}{(s+1)^2(s+2)^2}$

b. $\frac{1}{(s+1)(s+2)^2}$

c. $\frac{1}{(s+1)^2(s+2)}$

d. $\frac{1}{(s+1)^2}$ ✖

Your answer is incorrect.

The correct answer is: $\frac{1}{(s+1)^2(s+2)}$

Question 3

Correct

Mark 1.00 out of 1.00

$If L[f(t)] = F(s)\ then\ L[f(at)] =$

Select one:

a. $a\ F(\frac{s}{a})$

b. $\frac{1}{a}\ F(\frac{s}{a})$ ✔

c. $\frac{1}{a}\ F(\frac{a}{s})$

d. $\frac{1}{a}\ F(s)$

Your answer is correct.

The correct answer is: $\frac{1}{a}\ F(\frac{s}{a})$

Question 4

Correct

Mark 1.00 out of 1.00

$\int_0^\infty e^{-t}\ t\ Sin\ t\ dt =$

Select one:

a. 1

b. $\frac{1}{3}$

c. $\frac{1}{4}$

d. $\frac{1}{2}$ ✔

Your answer is correct.

The correct answer is: $\frac{1}{2}$

Question 5

Incorrect

Mark 0.00 out of 1.00

$L^{-1}[\frac{1}{s^{10}}] =$

Select one:

a. $\frac{t^9}{\Gamma(8)}$

b. $\frac{t^{10}}{\Gamma(10)}$

c. $\frac{t^9}{\Gamma(10)}$

d. $\frac{t^9}{\Gamma(9)}$ ✖

Your answer is incorrect.

The correct answer is: $\frac{t^9}{\Gamma(10)}$

Question 6
Correct
Mark 1.00 out of 1.00

$L(Sin\ h2t) =$

Select one:

- a. $\frac{2}{s^2+4}$
- b. $\frac{s}{s^2+4}$
- c. $\frac{s}{s^2-4}$
- d. $\frac{2}{s^2-4}$ ✔

Your answer is correct.

The correct answer is: $\frac{2}{s^2-4}$

Question 7
Correct
Mark 1.00 out of 1.00

$L^{-1}\{\frac{\pi e^{-s}}{s^2+\pi^2}\} =$

Select one:

- a. $Sin\ \pi t\ u(t)$
- b. $Sin\ (t-1)\ u(t-1)$
- c. none of these
- d. $Sin\ \pi(t-1)\ u(t-1)$ ✔

Your answer is correct.

The correct answer is: $Sin\ \pi(t-1)\ u(t-1)$

Question 8
Incorrect
Mark 0.00 out of 1.00

$L\{\delta(t-a)\} =$

Select one:

- a. e^{s}
- b. e^{-s}
- c. e^{as} ✖
- d. e^{-as}

Your answer is incorrect.

The correct answer is: e^{-as}

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