

VARIABEL KOMPLEKS TT-43-11 [IAL]

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Question 1

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{2}{(i\omega)^2 + 6i\omega - 27}$

Select one:



a.

$$-\frac{1}{6}e^{-9t}u(t) + \frac{1}{6}e^{3t}u(t) \checkmark$$



b.

$$\frac{1}{6}e^{9t}u(t) - \frac{1}{6}e^{-3t}u(t)$$



c.

$$-\frac{1}{6}e^{9t}u(t) + \frac{1}{6}e^{-3t}u(t)$$



d.

$$-\frac{1}{6}e^{9t}u(t) - \frac{1}{6}e^{-3t}u(t)$$

Your answer is correct.

The correct answer is:

$$-\frac{1}{6}e^{-9t}u(t) + \frac{1}{6}e^{3t}u(t)$$

Question 2

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{1}{(i\omega + 2)^2}$

Select one:

- ☐ a.
 $e^{(-2t)^2} u(t)$
- ☐ b.
 $e^{(2t)^2} u(t)$
- ☐ c.
 $t e^{2t} u(t)$
- ☒ d.
 $t e^{-2t} u(t)$ ✓

Your answer is correct.

The correct answer is:

$$t e^{-2t} u(t)$$

Question 3

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{4i\omega - 16}{(i\omega)^2 - 8i\omega + 15}$

Select one:

- ☒ a.
 $2e^{3t}u(t) + 2e^{5t}u(t)$ ✓
- ☐ b.
 $2e^{3t}u(t) - 2e^{5t}u(t)$
- ☐ c.
 $2e^{-3t}u(t) + 2e^{-5t}u(t)$
- ☐ d.
 $-2e^{-3t}u(t) - 2e^{-5t}u(t)$

Your answer is correct.

The correct answer is:

$$2e^{3t}u(t) + 2e^{5t}u(t)$$

Question 4

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(j\omega) = \frac{2}{j\omega + 9}$

Select one:

- ☐ a.
 $3 \sin(2t) u(t)$
- ☐ b.
 $-2 \sin(3t) u(t)$
- ☒ c.
 $2 e^{-3t} u(t)$ ✓
- ☐ d.
 $-3 \sin(2t) u(t)$

Your answer is correct.

The correct answer is:

$$2 e^{-3t} u(t)$$

Question 5

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{3 i\omega}{(i\omega)^2 + 8}$

Select one:

- ☐ a. $\sqrt{3} \cos(8t) u(t)$
- ☐ b. $-3 \cos(\sqrt{8}t) u(-t)$
- ☒ c. $3 \cos(\sqrt{8}t) u(t)$ ✓
- ☐ d. $3 \cos(8t) u(t)$

Your answer is correct.

The correct answer is:

$$3 \cos(\sqrt{8}t) u(t)$$

Question 6

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{1}{(i\omega)^2 + 4}$

Select one:

- ☐ a. $2 \cos(t) u(t)$
- ☐ b. $2 \sin(t) u(t)$
- ☒ c. $\sin(2t) u(t)$ ✓
- ☐ d. $\cos(2t) u(t)$

Your answer is correct.

The correct answer is: $\sin(2t) u(t)$

Question 7

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{i\omega}{((i\omega)^2 + 9)^2}$

Select one:

- ☐ a. $t^2 \cos(3t) u(t)$
- ☐ b. $t \cos(3t^2) u(t)$
- ☐ c. $t^2 \cos(3t^2) u(t)$
- ☒ d. $t \cos(3t) u(t)$ ✓

Your answer is correct.

The correct answer is:

 $t \cos(3t) u(t)$

Question 8

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{2}{i\omega - 3}$

Select one:

- ☐ a. $-2e^{-3t} u(t)$
- ☐ b. $2e^{-3t} u(t)$
- ☐ c. $-2e^{3t} u(t)$
- ☒ d. $2e^{3t} u(t)$ ✓

Your answer is correct.

The correct answer is: $2e^{3t} u(t)$

Question 9

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{-4}{(i\omega)^2 - 8i\omega + 15}$

Select one:

- ☒ a.
 $2e^{3t}u(t) - 2e^{5t}u(t)$ ✓
- ☐ b.
 $2e^{-3t}u(t) - 2e^{-5t}u(t)$
- ☐ c.
 $2e^{3t}u(t) + 2e^{5t}u(t)$
- ☐ d.
 $2e^{-3t}u(t) + 2e^{-5t}u(t)$

Your answer is correct.

The correct answer is:

$$2e^{3t}u(t) - 2e^{5t}u(t)$$

Question 10

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(j\omega) = \frac{2}{-5 + j\omega}$

Select one:

- ☐ a.
 $-2e^{5t}u(t)$
- ☐ b.
 $-2e^{-5t}u(t)$
- ☒ c.
 $2e^{5t}u(t)$ ✓
- ☐ d.
 $2e^{-5t}u(t)$

Your answer is correct.

The correct answer is:

 $2e^{5t}u(t)$

Question 11

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{2}{(i\omega)^2 + 9}$

Select one:

- ☐ a.
 $-2 \sin(3t) u(t)$
- ☐ b.
 $3 \sin(2t) u(t)$
- ☐ c.
 $2 \sin(-3t) u(t)$
- ☒ d.
 $2 \sin(3t) u(t)$ ✓

Your answer is correct.

The correct answer is:

 $2 \sin(3t) u(t)$

Question 12

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{3 i\omega + 5}{(i\omega)^2 + 16}$

Select one:

- ☐ a.
 $4 \cos(3t) u(t) + 4 \sin(5t) u(t)$
- ☐ b.
 $3 \cos(-4t) u(t) - 5 \sin(-4t) u(t)$
- ☒ c.
 $3 \cos(4t) u(t) + 5 \sin(4t) u(t)$ ✓
- ☐ d.
 $-3 \cos(4t) u(t) - 5 \sin(4t) u(t)$

Your answer is correct.

The correct answer is:

$$3 \cos(4t) u(t) + 5 \sin(4t) u(t)$$

Question 13

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari fungsi berikut $F(i\omega) = \frac{4 i\omega}{(i\omega)^2 + 25}$

Select one:

- ☒ a.
 $4 \cos(5t) u(t)$ ✓
- ☐ b.
 $-4 \cos(5t) u(t)$
- ☐ c.
 $-4 \sin(5t) u(t)$
- ☐ d.
 $4 \sin(5t) u(t)$

Your answer is correct.

The correct answer is:

 $4 \cos(5t) u(t)$

Question 14

Correct

Mark 1.00 out of 1.00

Tentukan invers transformasi fourier dari $F(i\omega) = \frac{1}{i\omega - 6}$

Select one:

☐ a.
 $6e^{-6t}u(t)$

☐ b.
 $6e^t u(t)$

☐ c.
 $e^{-6t}u(t)$

☒ d.
 $e^{6t}u(t)$ ✓

Your answer is correct.

The correct answer is:

$$e^{6t}u(t)$$

Question 15

Correct

Mark 1.00 out of 1.00

Tentukan invers Transformasi Fourier dari fungsi berikut $F(i\omega) = \frac{2}{i\omega + 4}$

Select one:

- ☐ a. $-2e^{4t}u(t)$
- ☐ b. $2e^{4t}u(-t)$
- ☒ c. $2e^{-4t}u(t)$ ✓
- ☐ d. $2e^{4t}u(t)$

Your answer is correct.

The correct answer is:

$$2e^{-4t}u(t)$$

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