Assignment 0

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-02-25, 23:59 IST.

1) For two forces given as

\[
\vec{F}_1 = 2\hat{x} - 1\hat{y} + 3\hat{z}
\]
\[
\vec{F}_2 = b\hat{x} - 5\hat{y} - 2\hat{z}
\]

Based on the information above, answer questions 1-3

Find \( b \), if the two forces are perpendicular.

- 0.5
- 0.6
- 4.33
- -4.33

No, the answer is incorrect.
Score: 0
Accepted Answers:
0.5

2) For the value of \( b \) calculated above, the magnitude of \( \vec{F}_1 \) and \( \vec{F}_2 \) is ______

- 4.690, 14.667
- 4, 14.667
- 3.741, 5.408
- 22, 3.829

No, the answer is incorrect.
Score: 0
Accepted Answers:
4\hat{x} - 2\hat{y} + 6\hat{z}
1\hat{x} - 2\hat{y} + 3\hat{z}
6\hat{x} - 3\hat{y} + 9\hat{z}

No, the answer is incorrect.
Score: 0
Accepted Answers:
4\hat{x} - 2\hat{y} + 6\hat{z}

Find Z_{in}
0\Omega
j\Omega
1\Omega
2\Omega

No, the answer is incorrect.
Score: 0
Accepted Answers:
0\Omega

5) Plot $V_L(t)$ vs t, Inductor is uncharged initially.

No, the answer is incorrect.
Score: 0
Accepted Answers:

6) For Problem 5, what is the time taken for $V_L(t)$ to be 90% of its final (steady state) value? 

- 2.302 s
- 0.250 s
- 4 s
- 0.105 s
7) Find Fourier transform of f(t), shown in figure below. 1 point

\[ j\pi\delta'(\omega) - \frac{1}{\omega^2} - \left[ j\pi\delta'(\omega) - \frac{1}{\omega^2} \right] e^{-j\omega} \]

\[ j\pi\delta'(\omega) - \frac{1}{\omega^2} + \left[ j\pi\delta'(\omega) - \frac{1}{\omega^2} \right] e^{-j\omega} \]

\[ j\pi\delta'(\omega) + \frac{1}{\omega^2} + \left[ j\pi\delta'(\omega) + \frac{1}{\omega^2} \right] e^{-j\omega} \]

\[ j\pi\delta'(\omega) + \frac{1}{\omega^2} - \left[ j\pi\delta'(\omega) - \frac{1}{\omega^2} \right] e^{-j\omega} \]

No, the answer is incorrect.
Score: 0
Accepted Answers:
2.302 s

8) Which plot correctly represents \( V_s(t) \) and \( V_c(t) \) at steady state

\[ j\pi\delta'(\omega) - \frac{1}{\omega^2} - \left[ j\pi\delta'(\omega) - \frac{1}{\omega^2} \right] e^{-j\omega} \]

No, the answer is incorrect.
Score: 0
Accepted Answers:

Which plot correctly represents \( V_s(t) \) and \( V_c(t) \) at steady state.
No, the answer is incorrect.
Score: 0

Accepted Answers: