Started on	Monday, 23 August 2021, 12:30 PM
State	Finished
Completed on	Monday, 23 August 2021, 12:40 PM
Time taken	10 mins 1 sec
Marks	6.00/8.00
Grade	**7.50** out of 10.00 (**75%**)

Question **1**

Correct

Mark 2.00 out of 2.00

The For a unity feedback system the open loop transfer function is G(s)=[K(s+3)]/[s(s^2+2s+9)]. What is the value of velocity error constant?

Select one:

○ a. k/9

○ b. 3/k

◉ c. k/3   ✔

○ d. 9/k

The correct answer is: k/3

Question **2**

Correct

Mark 2.00 out of 2.00

The error constants described are the ability to reduce the steady state errors.

Select one:

○ a. False

◉ b. True   ✔

The correct answer is: True

Question 3

Correct

Mark 2.00 out of 2.00

The steady state error for a unity feedback system for the input r(t) to the system $G(s) = K(s+1)/s(s^3+8s^2+2s)$ is $6(R/K)$. The input r(t) is:_____ (note: R and K are constants)

Select one:

- a. $(3R/2)t^2$ ✔
- b. $(3R/2)t^3$
- c. $(3R)t^3$
- d. $(3R)t^2$

The correct answer is: $(3R/2)t^2$

Question 4

Incorrect

Mark 0.00 out of 2.00

Consider the unity feedback system with open loop transfer function of $[K(s+4)]/[s(s+2)(s+4)(s+5)]$. The approximate minimum value of the steady state error to a ramp input $r(t) = 21tu(t)$ is:

Select one:

- a. 1/3
- b. 3
- c. 1/7 ✘
- d. 7

The correct answer is: 3

Dc ◄ Quiz #5

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MIDTERM EXAM ►