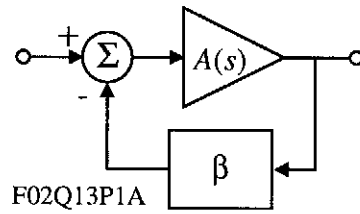


**QUIZ NO. 13**

NAME \_\_\_\_\_ Score \_\_\_\_\_ /10

1.) The amplifier in the feedback circuit shown has a transfer function of

$$A(s) = \frac{100}{\frac{s}{10^5} + 1}$$



What value of  $\beta$  will increase the upper -3db frequency by a factor of 10 for the closed loop gain? What is the closed loop, low frequency gain?

2.) Find the loop gain of the amplifier shown. Assume that  $g_m = 1\text{mS}$  and  $r_{ds} = \infty$  for all MOSFETs and that  $R = 10\text{k}\Omega$  and  $C = 100\text{nF}$ .

