

9. The I/P converter shown in FIGURE 3(a) is designed to produce the response 'A' of FIGURE 3(b). The balance equation for the system is

$$P_O = \left(\frac{K_C y}{Ax} \right) I_{IN} + \frac{F_s z}{Ax}$$

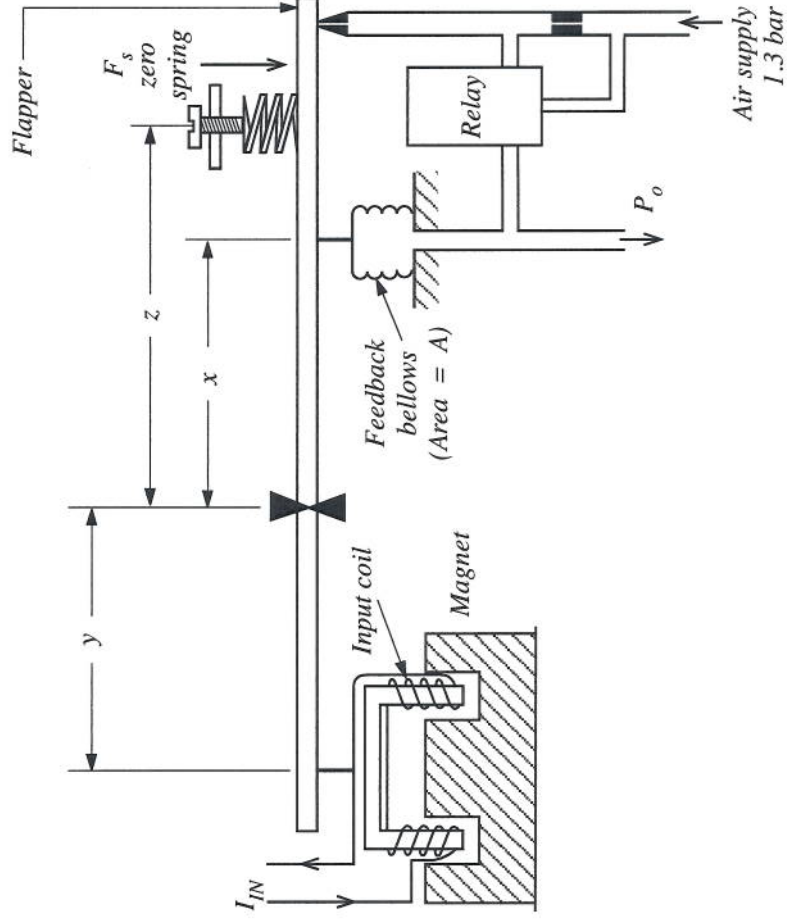
where K_C is a constant of proportionality relating to the input coil and F_s is the force exerted by the 'zero spring'. Given the data of TABLE 1, opposite, determine:

K_C	2500 N A^{-1}
$x + y$	100 mm
z	75 mm
A	5 cm^2

- (a) suitable values of y and x to give the response 'A' of FIGURE 3(b)

TABLE 1

- (b) the value of F_s required to correct the response 'B' of FIGURE 3(b).



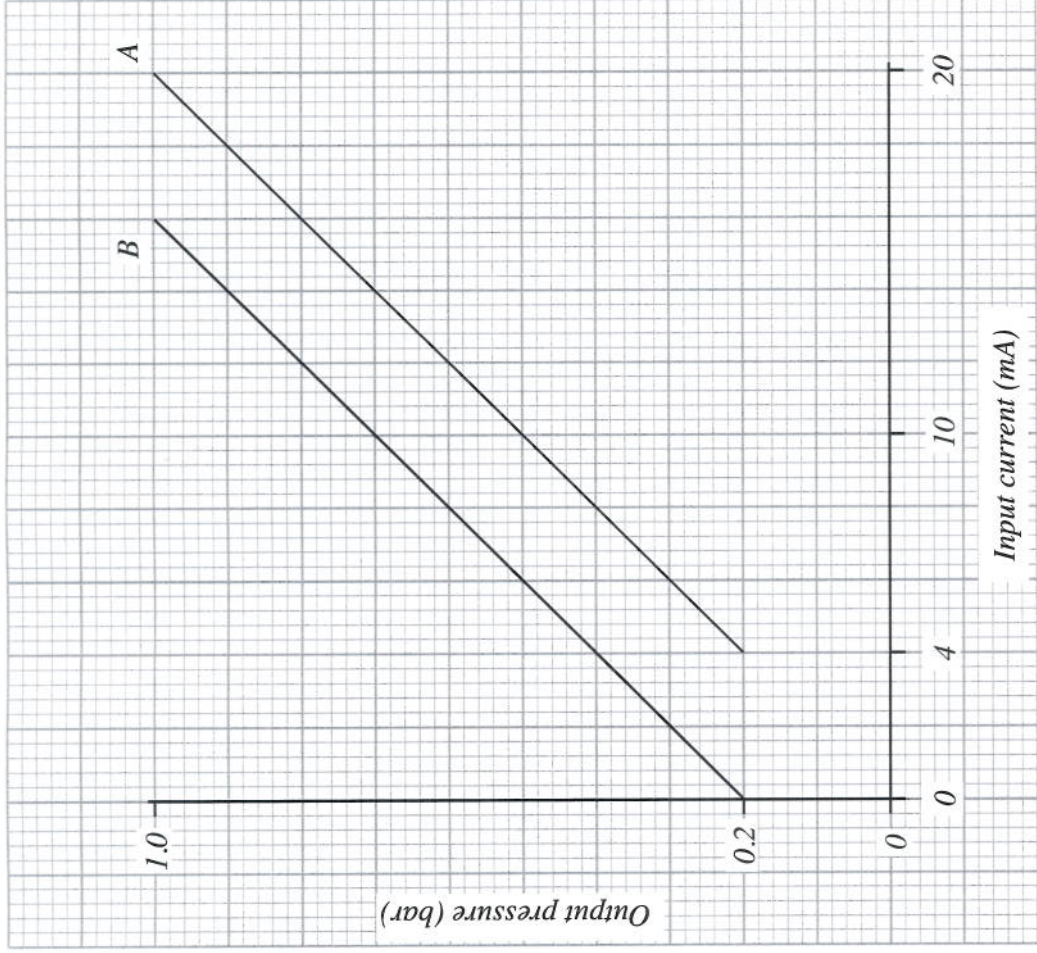


FIG. 3(b)