EE23BTECH11217 - Prajwal M*

EXERCISE 9.1

12 For the block diagram shown in the figure, the transfer function $\frac{Y(s)}{R(s)}$ is

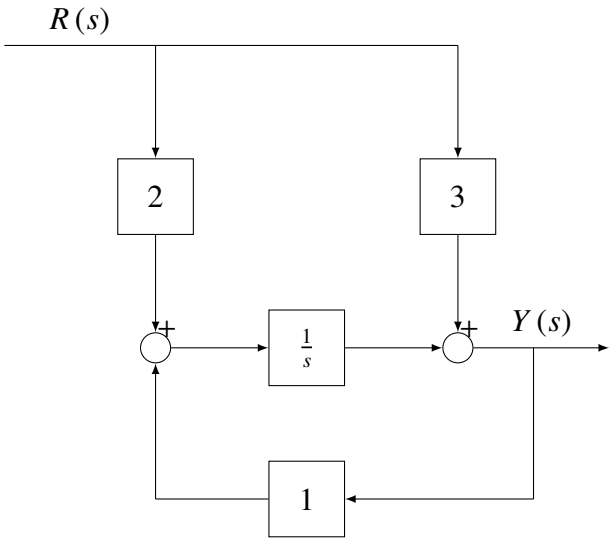

Fig. 1. block diagram

Solution:

Parameter	Description
$Y(s)$	output node signal
$R(s)$	input node signal
$\frac{Y(s)}{R(s)}$	transfer function

TABLE I
PARAMETERS

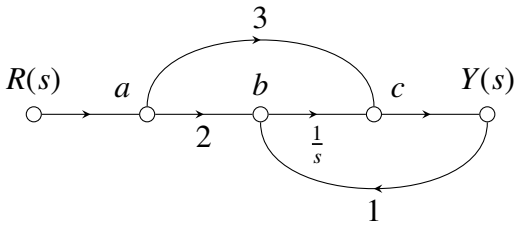

Fig. 2. signal flow graph

from Fig. 2,

$$\frac{2R(s)+Y(s)}{s}+3R(s)=Y(s) \tag{1}$$

$$\frac{Y(s)}{R(s)}=\frac{3s+2}{s-1} \tag{2}$$