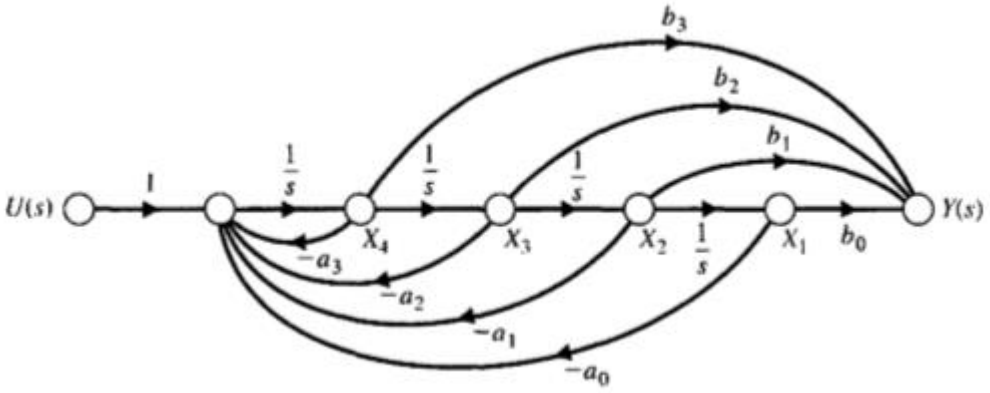
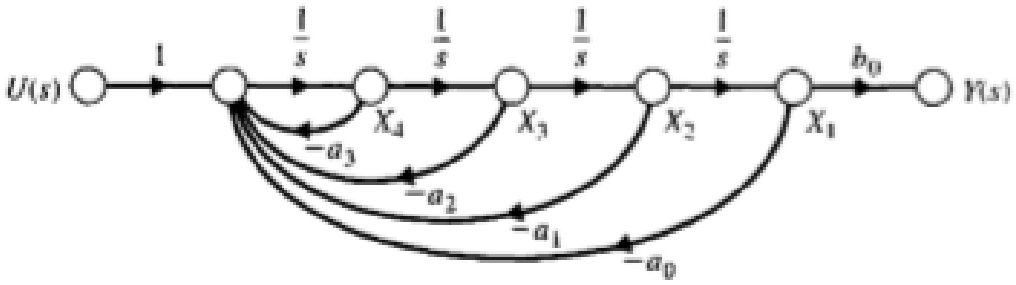
1. Se consideră STC cu graful din figură.
   i) Calculați f.d.t. (pentru sistemele de tip SISO) sau matricea de transfer (pentru sistemele de tip MIMO) a sistemului. (0.6 pt.)
   Matricea de transfer cuprinde toate f.d.t. corespunzătoare perechilor intrare-ieșire.
   ii) Stabiliți un MM-ISI (realizarea sistemică). d ≠ 8: (0.55 pt), d = 8: (0.4 pt.)
   Dacă vă este mai ușor, în prealabil puteți asocia grafului o schemă bloc.
   iii) d ≠ 8: Calculați polinomul caracteristic al sistemului(0.25 pt.). d = 8: Calculați polinomul caracteristic al sistemului. Analizați dacă sistemul poate avea o comportare de tip aperiodic, aperiodic critic și/sau oscilant amortizată (0.4 pt.)

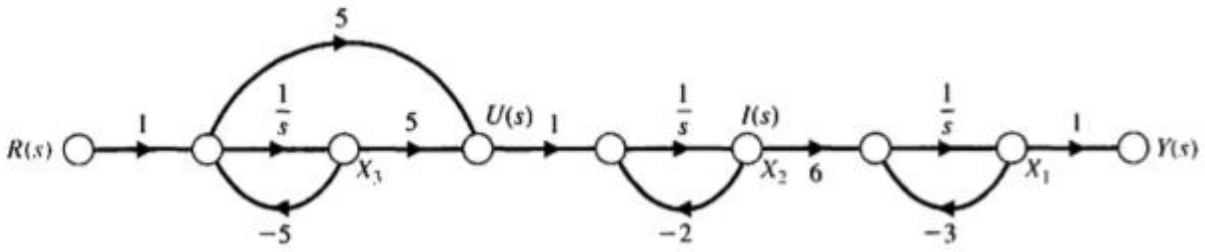
d = 0: Sistemul are orientarea U→Y.



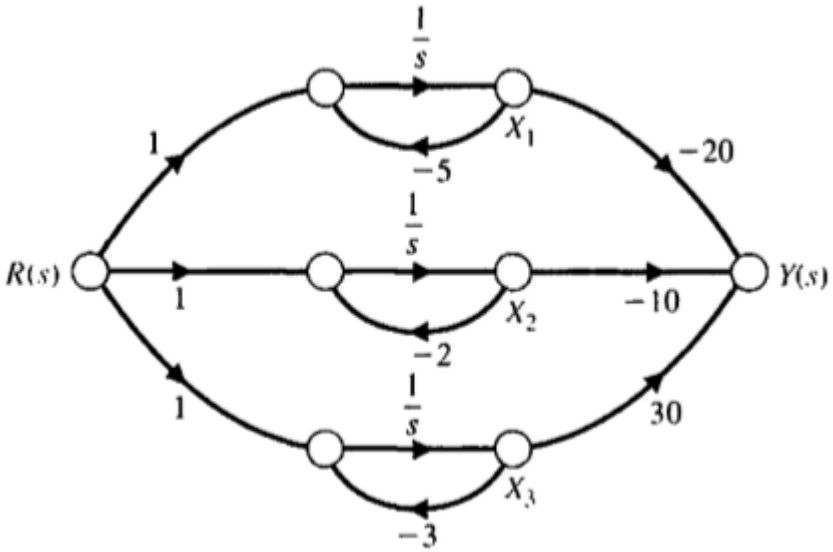
d = 1: Sistemul are orientarea U→Y.



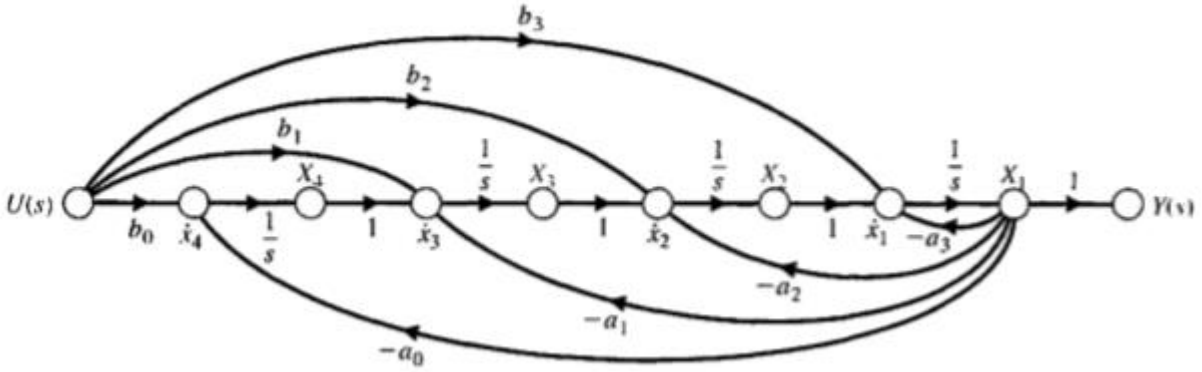
d = 2: Sistemul are orientarea R→Y.



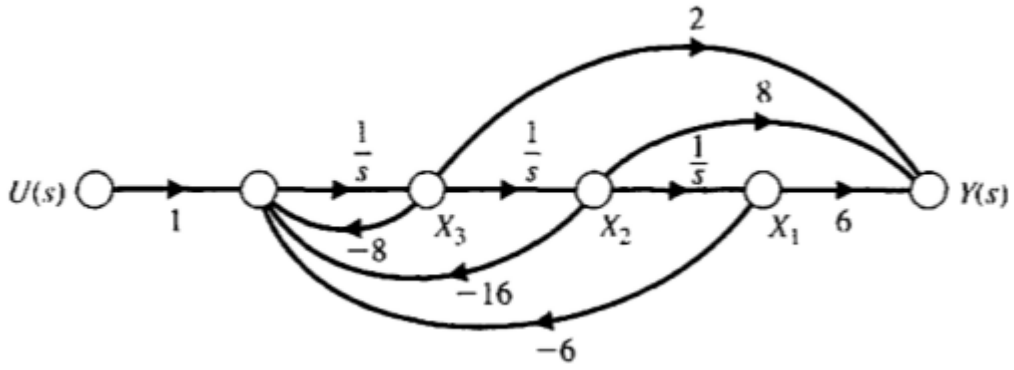
d = 3: Sistemul are orientarea R→Y.



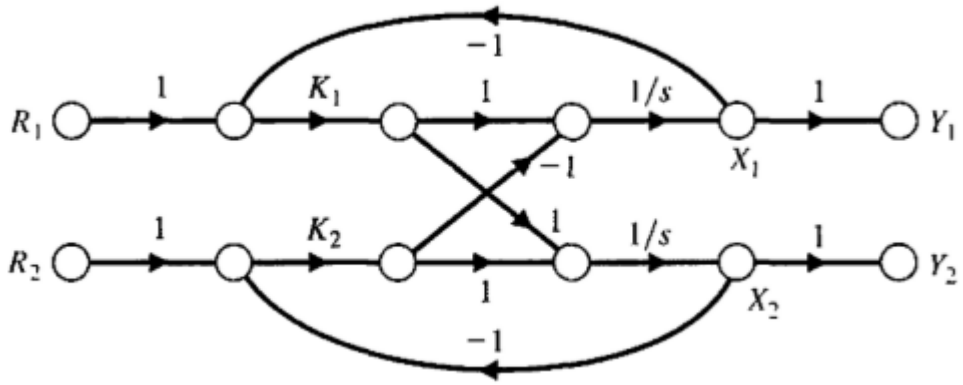
d = 4: Sistemul are orientarea U→Y.



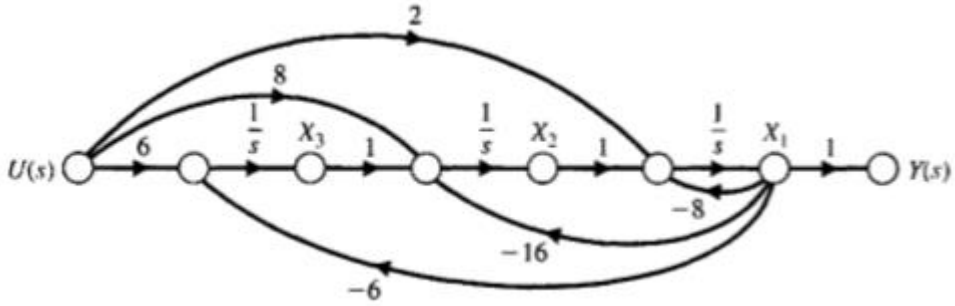
d = 5: Sistemul are orientarea U→Y.



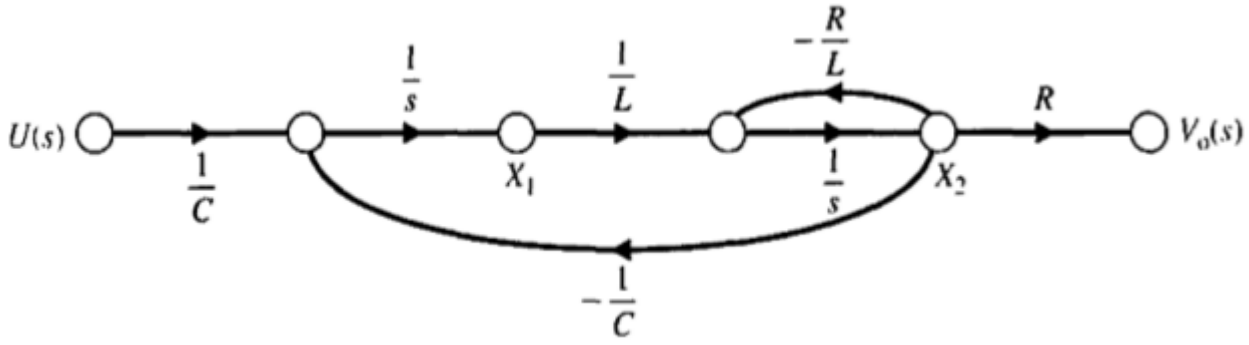
d = 6: Sistemul are orientarea $\{R_1, R_2\} \rightarrow \{Y_1, Y_2\}$



d = 7: Sistemul are orientarea U→Y.



d = 8: Sistemul are orientarea U→V_0.



d = 9: Sistemul are orientarea $\{U_1, U_2\} \rightarrow X_3$.