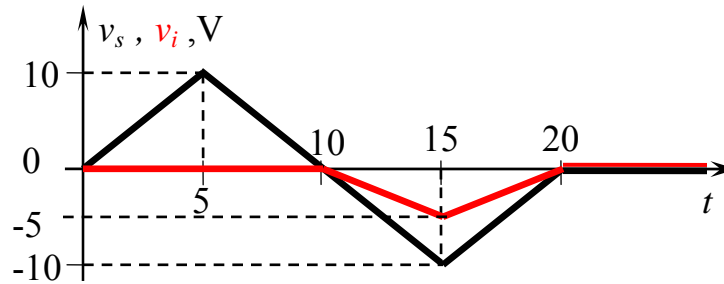


Elettrotecnica I - II – Esame del 10 - 09- 2008
Soluzioni

1)



2)

$$V_C(s) = \frac{4}{s^2 + 5s + 4} = \frac{4/3}{s+1} - \frac{4/3}{s+4}; \quad v_C(t) = \frac{4}{3} (e^{-t} + e^{-4t}) u(t), \text{ V, s}$$

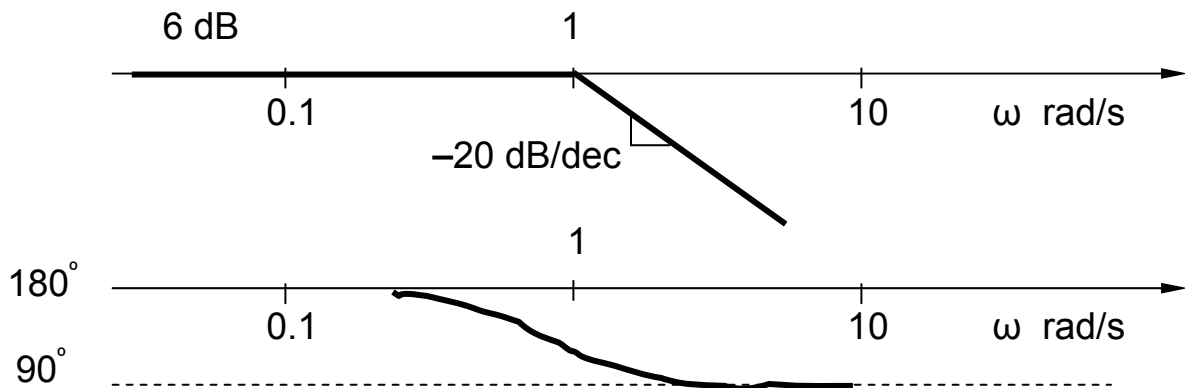
Analisi in regime sinusoidale

```

Vi 1 0 ac 1
L 1 2 1
C 2 0 0.25
R 2 0 0.8
.AC DEC 10 0.01 100
.PROBE
.END
    
```

3)

$$\frac{V_u}{V_e} = -\frac{R_2}{R_1} \frac{1}{sC_2R_2 + 1} = -\frac{2}{s+1}$$



4) $|X_C| = 5 \Omega \quad n_1/n_2 = 2$