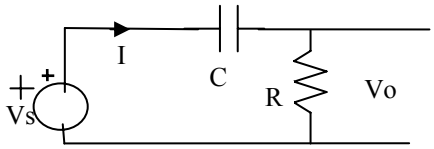
Haberleşme Sistemleri Ödev 4

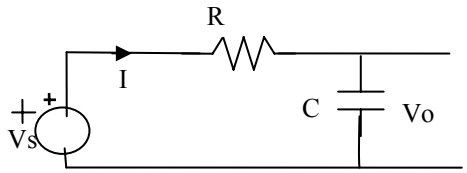
1) Şekildeki devrede $H(jw)=\frac{Vo(jw)}{Vs(jw)}=\frac{jwCR}{jwCR+1}$ olarak veriliyor. Asagidaki tabloyu doldurun. Devrenin genlik ve aci spektrumunu çizin. (R,C tabloda verilmiştir)



w	0	0.1	1	5	10	100
H(jw)						
| H(jw)|						
$\angle$H(jw)						

Spektruma bakarak bu devrenin ne tur bir filtre özelliği (AGF,BSF,BGF,YGF) taşıdığını belirtin. (AGF:Alçak Geçiren Filtre; BSF:Bant söndüren Filtre; BGF:Bant Geçiren Filtre ; YGF:Yüksek Geçiren Filtre).

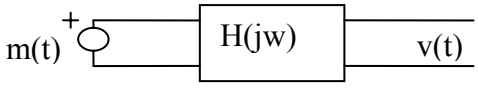
2) Şekildeki devrede $H(jw)=Vo(jw)/Vs(jw)=\frac{1}{jwCR+1}$ olarak veriliyor. Asagidaki tabloyu doldurun. Devrenin genlik ve aci spektrumunu çizin.

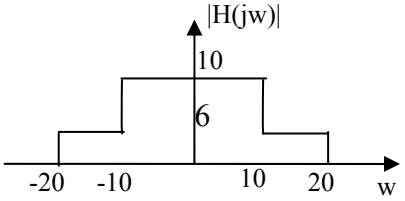


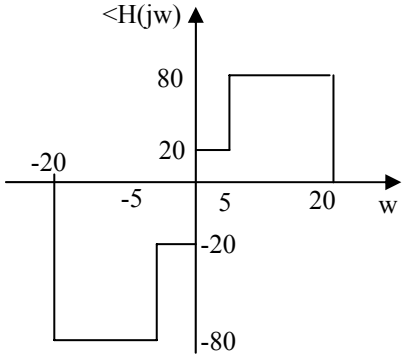
w	0	0.1	1	5	10	100
H(jw)						
| H(jw)|						
$\angle$H(jw)						

Spektruma bakarak bu devrenin ne tur bir filtre özelliği (AGF,BSF,BGF,YGF) taşıdığını belirtin. (AGF:Alçak Geçiren Filtre; BSF:Bant söndüren Filtre; BGF:Bant Geçiren Filtre ; YGF:Yüksek Geçiren Filtre).

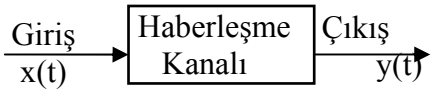
3) $m(t)= 2+5\cos(3t) + 8\cos(6t+\frac{\pi}{4}) + 30\cos(20t+\frac{\pi}{4})$ ise v(t) yi hesaplayın.







4)Girişi x(t)=2 cos(20t+10)+5cos(100t+20), çıkısı y(t)=D cos(20t-E)+X cos(100t-Y), olan sistemde distorsyon olmaması için X,Y ne olmalıdır. (D,E tabloda verilmiştir.)



No	R	C	D	E
9999	50	0.004	50	25
20110011042	40	0.003	50	15
20110011054	60	0.002	40	30
21110011013	50	0.003	50	25
21110011017	50	0.003	40	25
21110011026	30	0.003	50	30
22110011002	30	0.001	40	30
22110011007	60	0.001	30	25
22110011009	20	0.003	30	25
22110011025	50	0.001	20	20
22110011028	50	0.004	30	15
22110011031	40	0.004	20	15
22110011033	70	0.004	50	15
22110011042	60	0.005	20	25
22110011050	40	0.005	30	15
22110011303	30	0.002	30	25
22110011316	60	0.003	30	20
22110011329	30	0.002	50	30
22110011346	50	0.004	20	20
22110011358	40	0.001	30	30
22110011361	60	0.003	40	15
22110011363	30	0.005	30	30
22110011364	30	0.004	50	20
22110011366	60	0.005	50	20
22110011368	50	0.001	30	30
22110011369	50	0.002	50	25
22110011375	30	0.002	30	30
23110011003	50	0.002	50	30
23110011004	50	0.005	50	15
23110011006	50	0.004	30	15
23110011009	60	0.004	30	15
23110011012	60	0.001	40	25
23110011013	30	0.005	50	20
23110011014	70	0.003	50	30
23110011015	40	0.002	20	30
24110011002	40	0.002	20	30
24110011003	70	0.005	30	20
24110011004	60	0.003	50	20
24110011005	70	0.004	30	30
24110011006	70	0.003	50	15
24110011009	30	0.003	30	15
24110011010	30	0.005	50	25

24110011012	70	0.004	30	25
24110011014	30	0.004	20	20
24110011015	40	0.004	40	20
24110011016	40	0.001	30	25
24110011017	60	0.004	40	20
24110011019	70	0.001	40	30
24110011020	50	0.004	50	25
24110011021	40	0.003	50	15
24110011022	60	0.002	40	30
24110011025	50	0.003	50	25
24110011026	50	0.003	40	25
24110011309	30	0.003	50	30
24110011310	30	0.001	40	30
24110011506	60	0.001	30	25
24110011511	20	0.003	30	25
24110011512	50	0.001	20	20
24110011519	50	0.004	30	15
24110011520	40	0.004	20	15
24110011532	70	0.004	50	15
24110011533	60	0.005	20	25
24110011534	40	0.005	30	15
24110011535	30	0.002	30	25
25110011302	60	0.003	30	20
25110011303	30	0.002	50	30
25110011304	50	0.004	20	20
25110011306	40	0.001	30	30
25110011307	60	0.003	40	15
25110011309	30	0.005	30	30
25110011313	30	0.004	50	20
25110011314	60	0.005	50	20
25110011515	50	0.001	30	30