S.B.Roll No...

Network Filters And Transmission Lines
4th Exam/ECE/EMP/ETV/ECE(II)6107/2261/May'15

Duration :3hrs   **Max Marks:75**

SECTION –A

Q.1. Fill in the blanks: **(1.5 x 10=15)**

(a)   A network is said to be non-linear if it does not satisfy ....

(b)   The standing wave ratio is equalto .... When the load is perfectly matched.

(c)   The shunt element of a band stop filter is ....

(d)   For a prototype high pass filter with design resistance R0 and cut off frequency fc, the capacitance C is given by ....

(e)   In a lattice network if diagonal impedances are alike and identical as well series impedance, the network will be........

(f)   In high pass butter worth filter Vo = ...* Ei.

(g)   h-parameter in term of Y-parameters are h11=................,h12=...................., h21...................... .

(h)   Output impedance Zo in term Of Z-parameter is =................. .

(i)   Wave length and phase velocity are related as ....

(j)   Frequency of infinite attenuation is ....

SECTION –B

Q.2 Note : Attempt any five questions: **(5 x 6=30)**

a.   Discuss the properties of crystal filter.

b.   Discuss the various types of transmission lines.

c.   Design a prototype section of band pass filter with diagram

d.   Explain the application of transmission lines.

e.   Discuss limitations of passive filters

f.   Distinguish between balanced and unbalanced attenuators.

g.   Derive parameters of two port network.

SECTION –C

Note : Attempt any three questions: **(10 x 3=30)**

Q.3

(a)   What do you mean by symmetrical network ?
(b)   Explain the concept and significance of characteristic impendence .
Q.4   Write a short note on :
(a)   Propagation constant of a transmission line.
(b)   Voltage standing wave Ratio.
Q.5   Derive the equations of attenuation constant, phase constant and propagation constant.
Q.6   Differentiate between active and passive filter