

- Q.30 What is difference between active and passive filter, Explain in detail.
- Q.31 Write a short note on Infinite Line.
- Q.32 Explain various methods of loading in transmission line.
- Q.33 Draw a prototype band pass filter to match with a load of $500\ \Omega$ and cut of frequency 4 KHz also find resonant frequency.
- Q.34 What is a stub? Why it is used?
- Q.35 What do you understand by Π (PI) type of transmission line?

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 What is a symmetrical network? Explain concept of propagation constant and attenuation constant is a symmetrical 'T' network.
- Q.37 Write a short note on
- Band Pass Filter
 - SWR and VSWR
- Q.38 What are the various type of distortion in transmission line and also explain the condition for minimum distortion.

No. of Printed Pages : 4
Roll No.

171041/121041/31041

4th Sem / Eltx, Power Eltx Subject:- Network Filters and Transmission Lines

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Network is a combination of
- Electric Elements
 - Electronic Elements
 - Electric/Electronic Elements
 - None of the above
- Q.2 Attenuator consists of
- resistors
 - inductors
 - capacitors
 - none of the above
- Q.3 Attenuator is a _____ terminal network inserted between source and load.
- 1
 - 2
 - 3
 - 4
- Q.4 What is full form of LPF
- Linear pass filter
 - Low pass filter
 - Length pass filter
 - none of the above
- Q.5 An ideal filter have _____ attenuation in the pass band.

- a) zero b) one
c) infinity d) Any of the above
- Q.6 Transmission line insulators are made of
a) Porcelain b) Glass
c) Composite Polymer d) Any of the above
- Q.7 Filters are _____ selective network
a) Impedance b) Frequency
c) Impedance matching d) None of the above
- Q.8 In symmetrical PI network what is the values of shunt arm impedance
a) Z_1 b) $2Z_1$
c) Z_2 d) $2Z_2$
- Q.9 To maintain same cut-off frequency, both the sections of a network must have characteristic impedance _____ Z_0
a) same as b) different from
c) greater than d) lesser than
- Q.10 Open-wire transmission line have
a) two parallel conductor
b) coaxial wire separated by dielectric medium
c) optical fiber
d) all of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 A two port network has _____ terminals. (two /four)

- Q.12 In a asymmetrical T-network, series arm in both sides have same impedance. (True/False)
- Q.13 Define attenuators.
- Q.14 Decibel is a unit of _____ (capacitance/attenuation)
- Q.15 Inductor is a _____ element. (active / passive)
- Q.16 Name primary constant of transmission line.
- Q.17 Expand VSWR.
- Q.18 Write full form of HPF.
- Q.19 R,L,C and G are known as secondary constant of transmission line. (True/False)
- Q.20 $Z_{oc} * Z_{sc} =$ _____

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain two port network with block diagram.
- Q.22 What is a Symmetrical Π (PI) network?
- Q.23 Explain the terms-
a) Propagation constant
b) Attenuation constant
- Q.24 Drive an expression for characteristic impedance of Π (PI) network?
- Q.25 Explain difference between L-network and Bridge T-network.
- Q.26 Explain general characteristics of attenuator.
- Q.27 Draw and name different types of asymmetrical attenuator.
- Q.28 What is need of m-derived filter?
- Q.29 Write a note on Butterworth Filter in Detail.