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3rd Sem / Branch : 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
a) Electric Elements
b) Electronic Elements
c) Electric/Electronic Elements
d) None of the above

Q.2 Attenuator consists of
a) Resistors b) inductors
c) capacitors d) None of the above

Q.3 Attenuator is a_____terminal network inserted between source and load.
a) 1 b) 2
c) 3 d) 4

Q.4 What is full form of LPF
a) Linear pass filter b) Low pass filter
c) Length pass filter d) None of the above

Q.5 An ideal filter have_____attenuation in the pass band
a) zero b) one
c) infinity d) All of the above

Q.6 A band stop filter
a) Passes all frequencies above a particular frequency
b) Passes all frequencies below a particular frequency
c) Passes all frequencies between two specified frequencies
d) None 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 Z1 b) 2Z1
c) Z2 d) 2Z2

Q.9 To maintain same cut-off frequency, both the sections of a network must have characteristic impedance_____Zo
a) Same as b) different from
c) greater than d) Lesser than

Q.10 Open-wire transmission line have
a) Two parallel conductor separated by dielectric medium
b) Coaxial wire
c) Optical fiber
d) All of the above

SECTION-B

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

Q.11 A L-network is_____ network. (symmetrical/asymmetrical).

Q.12 A network having_____pairs of terminals is called two port network. (two/four)

Q.13 Define attenuator.

Q.14 An ideal filter should have_____ attenuation in stop band.

Q.15 An Attenuator amplifies the signal. (True/False)

Q.16 Write full form of BPF.

Q.17 Define cut off frequency of LPF?

Q.18 Write full form of HVDC.

Q.19 An equivalent circuit of Transmission line has capacitance in_____ arm.(series/shunt)

Q.20 Write full form of VSWR.

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 Explain briefly insertion loss.

Q.23 What is a Symmetrical π(PI) network?

Q.24 What is an image impedance?

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.

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 Explain briefly the primary constant of a transmission line.

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 Describe and explain different types of networks in detail with the help of diagrams.

Q.37 Explain how filters are classified on the basis of frequency characteristic? Also mention the applications of filters?

Q.38 Write a short note on any two-

a) Ladder attenuator

b) Active filter

c) Application of Transmission Line