1. What are the parameters of a dissipation-less line at radio frequencies?

a) Resistance and capacitance
b) Inductance and conductance
c) Resistance and inductance
d) Capacitance and conductance

Answer: b) Inductance and conductance

Explanation: A dissipation-less line at radio frequencies primarily exhibits inductance (L) and conductance (G), with negligible resistance and capacitance.

2. What are the characteristics of voltage and current on a dissipation-less line?

a) Voltage and current are in phase
b) Voltage leads current by 90 degrees
c) Voltage lags current by 90 degrees
d) Voltage and current are out of phase randomly

Answer: a) Voltage and current are in phase

Explanation: In a dissipation-less line, voltage and current are in phase with each other due to the absence of resistive losses.

3. What is the Standing Wave Ratio (SWR) a measure of?

a) Efficiency of a transmission line
b) Propagation speed of electromagnetic waves

c) Mismatch in a transmission line
d) Signal attenuation in a transmission line

Answer: c) Mismatch in a transmission line

Explanation: SWR measures the degree of mismatch between the transmission line and the load impedance.

4. What is the input impedance of an open circuit termination on a transmission line?

a) Zero
b) Infinity
c) Depends on the frequency
d) Depends on the length of the line

Answer: b) Infinity

Explanation: An open circuit termination results in an infinite input impedance due to the absence of a current path.

5. How is power measured on transmission lines?

a) Directly by voltmeter and ammeter
b) By calculating the product of voltage and current
c) Through impedance matching
d) By measuring the phase angle between voltage and current

Answer: b) By calculating the product of voltage and current

Explanation: Power on transmission lines is calculated by multiplying the voltage and current, typically using a wattmeter.

6. What type of transmission line is an eighth-wave line?

a) Short-circuited line
b) Open-circuited line
c) Quarter-wave line
d) Half-wave line

Answer: b) Open-circuited line

Explanation: An eighth-wave line is an open-circuited transmission line that is a multiple of one-eighth wavelength long.

7. What is the Smith chart used for in radio frequency engineering?

a) Power measurement
b) Impedance matching
c) Wave propagation analysis
d) Voltage measurement

Answer: b) Impedance matching

Explanation: The Smith chart is a graphical tool used for impedance matching and analyzing transmission line problems.

8. How can the Smith chart be utilized to solve transmission line problems?

a) By directly measuring voltage and current
b) By plotting impedance values and performing calculations
c) By analyzing wave propagation speed
d) By calculating standing wave ratios

Answer: b) By plotting impedance values and performing calculations

Explanation: The Smith chart allows engineers to plot complex impedance values and perform calculations to solve transmission line problems.

9. What is single stub matching used for in transmission lines?

a) Impedance transformation
b) Voltage measurement
c) Power distribution
d) Current measurement

Answer: a) Impedance transformation

Explanation: Single stub matching is a technique used to transform the impedance seen at one point along a transmission line to a desired value.

10. What is the purpose of double stub matching in radio frequency engineering?

a) To increase power transmission efficiency
b) To decrease standing wave ratio
c) To achieve impedance matching
d) To eliminate voltage fluctuations

Answer: c) To achieve impedance matching

Explanation: Double stub matching is a method used to achieve impedance matching in transmission lines by adjusting the positions and lengths of two stubs.

11. What is the primary characteristic of a quarter-wave line?

a) Open circuit at one end
b) Short circuit at one end
c) Half the length of a half-wave line
d) Double the length of an eighth-wave line

Answer: b) Short circuit at one end

Explanation: A quarter-wave line is characterized by a short circuit at one end and an open circuit at the other end.

12. In microstrip lines, where are the conductive traces usually located?

a) Between two dielectric layers
b) Embedded within a dielectric substrate
c) Above a dielectric substrate
d) Below a dielectric substrate

Answer: c) Above a dielectric substrate

Explanation: In microstrip lines, the conductive traces are typically located above a dielectric substrate.

13. What is the analysis method often used for microstrip lines?

a) Transmission matrix analysis
b) Finite element method
c) Smith chart analysis
d) Moment method

Answer: b) Finite element method

Explanation: The finite element method is commonly used for the analysis of microstrip lines due to its versatility and accuracy.

14. What does a half-wave line typically require at its termination points?

a) Open circuit
b) Short circuit
c) Matching network
d) Variable resistor

Answer: a) Open circuit

Explanation: A half-wave line typically requires an open circuit at its termination points for proper operation.

15. What property distinguishes a dissipation-less line from a typical transmission line?

a) Higher power handling capacity
b) Lower propagation speed

c) Absence of resistive losses
d) Higher standing wave ratio

Answer: c) Absence of resistive losses

Explanation: The primary distinction of a dissipation-less line is the absence of resistive losses, leading to theoretically infinite propagation of signals without attenuation.

Related posts:

1. Web Development Essentials MCQs
2. HTML MCQs
3. Style sheets MCQs
4. XML MCQs
5. PHP and MySQL MCQs
6. Basics of programming MCQs
7. Decision control structure MCQs
8. Array MCQS
9. C Programming Essentials Structures, Preprocessor, and Unions MCQs
10. Basic concepts of OOP MCQS
11. Unix/Linux MCQs
12. The Shell Basic Commands, Shell Programming MCQs
13. File System MCQs
14. Process Control MCQS
15. System Security MCQs.
16. Dynamic Host Configuration Protocol MCQs
17. Introduction to Energy Science MCQs
18. Ecosystems mcqs

19. Biodiversity and its conservation MCQs
20. Environmental Pollution mcqs
21. Social Issues and the Environment mcqs
22. Signals and Systems MCQs
23. Linear Time- Invariant Systems mcqs
24. z-Transform mcqs
25. Fourier analysis of discrete time signals mcqs
26. State-Space Analysis, Sampling Theorem, and Signal Reconstruction mcqs
27. Frequency domain representation of signal mcqs
28. Modulation Techniques mcqs
29. FM Modulation & Transmission MCQs
30. Understanding AM and FM Transmission Noise and Receiver Characteristics
31. Control System MCQs: Basics, Feedback, and Analysis
32. Control System Analysis MCQs
33. Frequency Domain Analysis MCQs
34. System Design and Compensation Techniques MCQs
35. State Space & Control Systems MCQs
36. Feedback Amplifiers and Oscillators MCQs
37. Introduction to ICs and Op-Amps MCQs
38. Op-Amp Characteristics MCQs
39. OP-AMP applications MCQs
40. Electronic Circuits with 555 Timer MCQs
41. Voltage Regulator MCQs
42. Discrete-Time Signals and Systems MCqs
43. The z-Transformmcqs
44. Frequency Analysis of Discrete Time Signals mcqs
45. Efficient Computation of the DFT mcqs

46. Digital filters Design Techniques Mcqs
47. Radiation mcqs
48. Antenna Fundamentals mcqs
49. Types of antennas mcqs
50. Aperture and slot mcqs
51. Propagation of radio waves mcqs
52. Data Communication mcqs
53. OSI model mcqs
54. ERROR CONTROL AND DATA LINK PROTOCOLS mcqs
55. NETWORKS mcqs
56. NETWORKING DEVICES AND TCP / IP PROTOCOL SUITE mcqs
57. CMOS VLSI Circuit Design MCQs
58. Specification of sequential systems mcqs
59. Satellite Systems and Orbital Mechanics MCQs
60. Satellite Communication & Polarization MCQs
61. Satellite and Earth Segment MCQs
62. Satellite Communication MCQs
63. Satellite Services MCQs
64. 8051 Interfacing & Serial Communication MCQs
65. MCU Overview 8096 and PIC mcqs
66. Introduction to Embedded Systems mcqs
67. Embedded System Architecture mcqs
68. Input Output and Peripheral Devices mcqs
69. PHYSIOLOGY AND TRANSDUCERS mcqs
70. ELECTRO – PHYSIOLOGICAL MEASUREMENTS mcqs
71. NON-ELECTRICAL PARAMETER MEASUREMENTS mcqs
72. MEDICAL IMAGING MCQS

73. ASSISTING AND THERAPEUTIC EQUIPMENTS MCQS
74. Power Semiconductor Switches MCQS
75. Rectifiers and Thyristors MCQs
76. Inverters & Cycloconverters Inverters MCQs
77. AC Voltage Controllers MCQs
78. DC – DC Converters MCQS
79. Practical Consideration and Technology in VLSI Design MCQs
80. Device Modeling MCQs
81. Circuit Simulation MCQs
82. Structured Digital Circuits and Systems MCQs
83. CMOS Processing Technology MCQs
84. Microwave Engineering MCQs
85. Microwave Semiconductor Devices MCQs
86. RF Network Analysis & Measurement MCQs
87. Microwave Components and Circuits MCQs
88. RF & Microwave Circuit Design MCQs
89. Information Theory MCQs
90. Coding theorem MCQs
91. Information Channels MCQs
92. Error Control Coding MCQs
93. BCH and Convolutional Codes MCQs
94. Nanoscale Semiconductor Physics MCQs
95. Introduction to lithography MCQs
96. Tunnel Junctions and Tunneling Phenomena MCQs
97. Nanoelectronics MCQs
98. Scaling of physical systems MCQs
99. Cellular Mobile Systems MCQs

100. Wireless Communication Essentials MCQs
101. Cochannel interference reduction MCQs
102. Types of Noncochannel interference MCQS
103. Cellular Network Management MCQs
104. Digital Cellular Systems MCQs
105. IoT Essentials MCQs
106. IoT Technologies MCQs
107. Design Principles for Web Connectivity MCQs
108. IoT Technologies MCQS
109. IOT Design methodology MCQs
110. Probability and Random Variable MCQs
111. Probability Distributions and Expectations MCQs
112. Multiple Random Variables MCQS
113. Stochastic Processes MCQs
114. Optical Fiber Basics MCQs
115. Signal degradation in Optical Fibre MCQs
116. Optical sources and detectors MCQs
117. Optical Communication MCQs
118. Optical networks and amplifiers MCQS
119. 5G Wireless Communications MCQ
120. 5G Wireless Propagation Channels MCQS
121. 5G Transmission and Design Techniques MCQS
122. D2D and M2M Communications MCQS
123. Millimeter-Wave Communications MCQs
124. Review of Cellular Networks MCQS
125. LTE systems MCQS
126. Wireless Sensor Networks MCQS

127. Wireless routing Protocols MCQS
128. Internet of things (IoT) and GPS systems MCQS
129. Digital Image Processing MCQs
130. Transforms and Their Properties MCQs
131. Image Enhancement Techniques MCQs
132. Image Restoration MCQs
133. Compression & Image Watermarking MCQs
134. Speech Processing Fundamentals MCQs
135. Speech Distortion Analysis MCQs
136. HMMs in Speech Modeling MCQs
137. Large Vocabulary Continuous Speech RecognitioN MCQS
138. Text-to-Speech Synthesis MCQS
139. Theory of Measurement MCQs
140. Cathode Ray Tubes, Oscilloscopes, and Bridge Circuits MCQs
141. Transducer MCQs
142. Signal and Function Generators, Displays MCQS
143. Digital and Analog Conversion MCQs
144. Number Systems MCQS
145. Combinational logic circuits MCQS
146. Sequential Logic Design MCQs
147. Registers and Counters MCQS
148. Logic Families and Semiconductor Memories MCQS
149. Semiconductor MCQs
150. Diode Circuits & Power Supply MCQs
151. Fundamentals of BJT MCQS
152. Small Signal analysis MCQs
153. Electronic Devices MCQs

154. Introduction to circuit theory MCQS
155. Network Graph theory MCQs
156. Network Theorems MCQS
157. Electrical Circuit Analysis and Laplace Transform MCQs
158. Two port parameters MCQS
159. Evolution of Microprocessors: From 8086 to Pentium MCQs
160. 8086 Microprocessor MCQs
161. Interfacing Chips in Microprocessor Systems MCQS
162. Peripheral Devices in Computer Systems MCQS
163. 8051 Microcontrollers & Embedded Systems MCQs
164. Sampling, Modulation, and Multiplexing MCQs
165. Digital Communication Techniques MCQs
166. Digital Modulation Techniques MCQs
167. Modulation Techniques and Signal Processing MCQs
168. Information Theory and Communication MCqs
169. Two-Port Networks and Matching Techniques MCQs
170. Passive LC Filters MCQs
171. Transmission Line Fundamentals MCQs
172. Top MCQs for Practice: Sharpen Your Knowledge and Test-Taking Skills
173. Cyber Security MCQs
174. Image Processing MCQ
175. Software engineering MCQ
176. Set Theory, Relation, and Function MCQ
177. Sorting MCQ
178. MCQ
179. Study of Greedy strategy MCQ
180. Computer Architecture, Design, and Memory Technologies MCQ

181. CPU Scheduling MCQ
182. Software Architecture documentation MCQ
183. Deep Learning MCQs
184. Hadoop and Related Concepts MCQ
185. Cryptography and Information Security Tools MCQ
186. Introduction to Scrum MCQs
187. Computer Network MCQ
188. Syntax Analysis &Syntax Directed Translation MCQs
189. Advanced topics and case studies in knowledge management MCQs
190. Research Methodology MCQs
191. Understanding Block chain for Enterprises MCQs
192. Introduction to modern processors MCQs
193. Object Oriented Design MCQs
194. Systems and Interactivity Understanding Choices and Dynamics MCQs
195. Innovation Management MCQs
196. Database Management System (DBMS) MCQs
197. BIG DATA TECHNOLOGIES MCQs
198. Pattern Recognition MCQs
199. Paints, Enamels and Varnishes MCQs
200. Building Planning MCQS