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The minimum impedance of a transmission line 75 ohm with a standing wave ratio of 4 is

The stationary wave ratio of a 75 transmission line used to feed a resistive load of 300 î© will be _____. Please log in or register to add a comment. Page 2 A dominant wave is characterized by ____ asked May 29, 2018 by anonymous Please log in or register to add a comment. Page 3 If the Voltage Standing Wave Ratio (VSWR) of a wave is 2, its reflective coefficient will be _____. Please log in or register to add a comment. Page 4 The shunt element of the high-prototype filter is _____. Â Please log in or register to add a comment. Page 5 For a low pass filter prototype, the series and shunt elements are respectively ____. Please log in or register to add a comment. Page 6 The attenuation in a network in decibel is equal to _____. Please log in or register to add a comment. Page 7 A small capacity is added to a highly inductive circuit. The angle between voltage and current will be _____. Please log in or register to add a comment. Page 8 Kirchhoff's current law states that "The sum of currents entering a joint is equal to the sum of currents coming out of the joints." Please log in or register to add a comment. Page 9 Transitional currents are due to ____ requested May 29, 2018 by anonymous Please log in or register to add a comment. Page 10 A coil with large distributed capacity has _____. Please log in or register to add a comment. Page 11 Static electricity is produced by ____ requested May 29, 2018 by anonymous Please log in or register to add a comment. Page 12 The capacity will increase if Â connected Â in parallel Â because Â it will be Â as Â you haveÂ increased surface Â area Â of Â one plate Â by connecting Â it to Â another. Please log in or register to add a comment. Page 13 The absorbed moisture content affects the dielectric force_____. Please log in or register to add a comment. Page 14 If an atom loses one or more electrons, it becomes _____. Please log in or register to add a comment. Page 15 Which of the following engines has the winding of the squirrel cage on the stator: (1) 3-phase squirrel cage induction motor (2) Single-phase squirrel pump motor (3) Ceiling blower induction motor (4) Single-phase table motor please log in or register to add a comment. Page 16 The following sequence is adopted for shutdown and the EHV circuit for maintenance: (1) Open the switch, open the insulator, operate the mass switch (2) Operate the mass switch, open the mass switch, open the switchOpen the bulk switch, operate the ground switch Page 17 The ground switch Page 17 The mass switch of the electromagnetic spectrum with decreasing frequency is: (1) Microwave, radio wet, infrared rays, Ultraviolet rays, X-rays (2) Radio waves, infrared rays, ultraviolet rays, microwave, x-ray (3) X-rays, infrared, microwave, ultraviolet rays (4) X-rays, x, rays, infrared rays, microwaves, radioonde, page 18 the base oscilator of Hartley uses: (1) a inductor and two capacitors (2) a central inductor and a condenser (3) two capacitors (4) tickler coilâ, performs the Login or register to add a comment. Page 19 In the common emitters transistor circuit, if the current gain is 100 and the collector's current is 10 mA, the basic current is: (1) 10 Â,îa (2) 100 Â,îa (3) 1 A (4) 10 Aâ, please login or register to add a comment. Page 20 In a full wave rectifier with input frequency of 50 Hz, the output frequency is: (1) 50 Hz (2) 100 Hz (3) 150 Hz (4) 200 Hz Login or register to add a comment. Page 21 A circuit is said without phase distortion if the phase response shows: (1) Quadrature variation with frequency (2) frequency independent (3) linear variation with frequency (4) proportional to the frequency please Login or register to add a comment. Page 22 When the initial slope of the input sinusoidal wave is greater than the SLEW speed of an OPAMP, the output: (1) has no offset (2) approaches to the triangular wave (3) is Pure sinusoidal (4) Onda Quadraâ, please log in or register to add a comment. Page 23 The bright diodes emitted consist of: (1) SI (2) GAAS (3) GE (4) diamond, please log in or register to add a comment. Page 24 The phase correction circuit is: (1) Low pass filter (2) Low-pass filter (3) High-pass filter (4) Pass-band filter Please log in or register to add a comment. Page 25 The output wave form of a 555 timer is: (1) sinusoidal (2) triangular (3) rectangular (4) elliptical, please log in or register to add a comment. Page 26 The term Â «White noise» refers to the following: (1) A random signal with spectral density of flat power (2) A random signal generated by a Beat signal (3) A random signal with long-range correlation (4) All the above is true, log in or register to add a comment. SWR (standing wave ratio) â€ "in RF and microwave, the ratio between the amplitude of the maximum (in a line) and the width of the minimum (in the same line) of the stationary wave in a cable, a hollow €™ Antenna or a wave guide. SWR is an alignment speed of the load impedance with the internal impedance of the power line or the wave guide. The problem of the non-aligned impedance leads to the appearance of unwanted stationary waves along the transmission line. The CFA is defined as the ratio between the amplitude of the stationary wave (unwanted) to the maximum and the minimum amplitude along the transmission line. SWR features the degree of combination between the loading Wi-Fi antenna and the power supply (coaxial cable or wave guide of Sometimes SWR is given to match the output of the Wi-Fi wireless access point and its power supply. In practice, there is always a part of the transmitted energy that is reflected and returned to the transmitter. Too much reflected energy degrades the operation of the wireless transmitter or it can even be damaged. Typically, the CFA is perceived perceived the point of view of the maximum and minimum alternating voltage along the coaxial line, which is called the standing voltage wave ratio or VSWR. For example, the value of VSWR 1.2:1 means the RF voltage due to standing waves along the transmission line, reaching a peak value of 1.2 times the minimum RF voltage along this cable. SWR can also be defined as the ratio of the maximum amplitude to the minimum amplitude of the electric field force, of the magnetic field force or of the supply line currents. These relationships could be identical if we neglect the loss of the transmission line itself. Ideally, the SWR = 1 – this means that the reflected wave is absent. Values up to 1.5 are considered acceptable in the Wi-Fi range of 2400-2485 MHz. When a reflected wave appears, the SWR increases in direct proportion to the degree of power supply and dismatch load. Basically, the Standing Wave Voltage Ratio (VSWR) is most often used. This parameter shall be specified in the technical requirements for the transmission device. In addition, there are standards for the maximum permitted level of SWR. The SWR is the inverse of the travel wave ratio (TWR). With a poor load correspondence, standing waves appear in the cable, which worsens the work of Wi-Fi equipment as a result of: – reduces the efficiency of the power supply, and thus the overall efficiency of the transmitter; the real sensitivity of the receiver decreases; – reduces the maximum power that can be brought to the antenna power supply. But, it can be concluded that the existing antenna power supply will work much better if the SWR is reduced to 1 only after comparing its characteristics with the existing equipment with SWR and SWR = 1. To measure the standing wave ratio, special measuring instruments called SWR meters are used. Since the SWR is a coefficient of the impedance of the load relative to the characteristic impedance of the transmission line used (which together determines the coefficient of reflection), this SWR meter can only interpret the impedance it sees in terms of SWR if it is designed for that specific impedance. Basically, most of the transmission lines used in modern applications are coaxial cables with a resistance of 50 or 75 Ohms, so most SWRs match one of them. Home Â" Communications Â" Questions and Answers Â" Transmission Basics Â" Next Article Previous Article (last update: May 6, 2020) This is the Multiple Choice Questions Part 6 of the series in Transmission Basics as one of the themes of Communications Engineering. In preparation for the consideration of the ECE Council make sure to expose and in each and every question compiled here taken from various sources, including, but not limited to, requests for examination of the Council passed into electronic system and technologies, communication books, journals and other communication references. MCQ MCQ Output line included in ECE Board Exam Syllabi MCQ in Transmission System MCQ in Transmission Medium MCQ in Velocity and Line Wavelength MCQ in Features Impedance MCQ in Primary Line Constants and Propagation Constants MCQ in Standing Waves MCQ in Standing Wave Ratio MCQ in phone lines and MCQ cables in Wave Guides MCQ in wire What is the characteristic impedance of a single wire with diameter d = 0.25 mm placed at the center between parallel planes separated from 1 mm away? Is the wire held by a material with a speed factor of 0.75? a. 75 ohms b. 120 ohms c. 100 ohms d. 300 ohms Answer: Option A Solution: 252. There is an improper impedance between a 30 W transmitter and the antenna and 5 W is reflected. How much power is actually transmitted? a. 35 W b. 25 W c. 30 W d. 20 W 253. What is the actual standing length of a wavelength of a quarter of coaxial with a speed factor of 0.669 to 40 MHz? a. 6.15 b. 4.244 c. 5.904 d. 16.974 254. A fourth wave line is connected to a RF generator and is shortened to the extreme. What is the input impedance to the line to the generator? a. A low resistance value b. A high resistance value c. A capacitive reactivity that is equal to the impedance of the wave d. A resistance value equal to the characteristic impedance of line 255. A coaxial cable has a capacity of 90 pF/m and an impedance feature of 75 ohms. Find the inductance of a length of 2 m. a. 1.013 uH b. 450 nH c. 506.25 nH d. 225 nH 256. If the SWR on a transmission line has a high value, the reason could be a. An impedance error between the line and the load b. That the line is not resonant c. A coefficient of reflection of zero to the load d. A high degree of attenuation between the load and the position in which the SWR 257 is measured. Calculates the speed factor of a coaxial cable used as a transmission line with the impedance feature of 50 ohms; capacity is 40 pF/m and an inductance of 50 microH/m. a. 0.7450 b. 0.7504 c. 0.0745 d. 0.0475 258. If a square wave transmission line is shortened at one end a. There is minimum current at the short end b. The line behaves as a parallel circuit in relation to the c generator. The line behaves as a series tuned circuit in relation to the d generator. There is a maximum voltage at the short end 259. What is the input impedance of a cable with a Teflon dielectric (relative permission = 2.1)? a. 0.69 b. 0.476 c. 2.1 d. 1.449 260. A 50-ohm transmission line is feeding an antenna that represents a 50-ohm resistive load. To shorten the line, the length must be one. Any convenient value b. An odd multilevel of three quarters of wavelength c. One also multiple of a quarter wavelength d. One also multiple of a quarter of a half wavelength 261. A feature of aThe transmission line is that a. Its input impedance of the generator is equal to the surge impedance of the line b. Its phase speed is greater than the speed of light c. The impedance varies at different positions on the line d. The input impedance is equivalent to a short circuit 262. The coaxial cable outer conductor is usually grounded to. At the beginning and end of the cable b. Only at the beginning of the cable c. Only at the end of the cable. The outer conductor must never be earthed 263. What is the impedance of a 4-wire balancing with a diameter of 0.25 cm and spaced 2.5 cm apart using an insulator with a dielectric constant of 2 , 562 a. 100 ohms b. 160.5 Ohms c. 88.93 ohms d. 25.8 ohms 264. An attenuator has a loss of 26 dB. If a power of 3 W is applied to the attenuator, located in the output power. a. 1.65 watts b. 7:54 milliwatts c. 1194 watts d. 5,459 Watts 265. When the surge impedance of a line is coupled to a load, the line will be at. Transfer the maximum current on the load b. Transfer the maximum voltage on the load c. Transfer the maximum power on the load a. Having a VSWR equal to zero 266. A lossless line is terminated by a resistive load that is not equal to the surge impedance. If the value of the reflection coefficient is 0.5, the VSWR is a. 2 b. 3 c. 1.5 d. 5 267. The best isolation on UHF is a. Black rubber b. Bakelite c. Charter d. Mica 268. Neglecting losses of the line, the RMS voltage across an RF transmission line has no standing waves. It is equal to the impedance b. It's half surge impedance c. It is the product of the impedance of the voltage and current of the privilege d. It varies along the sinusoidal line 269. Which length of coaxial cable RG-8 / U standard would be necessary in order to obtain a shift of 30 degrees to 250 MHz? a. 0.792 m b. 0.99 m c. 0.066 m d. 0.124 m 270. The nitrogen is placed in transmission lines to a. Enhance the effect of the microwave skin b. Reduce the bow in the line c. Reduce the standing wave ratio of the line d. Prevent moisture from entering the line 271. Referring to the fundamental frequency, one of the short-circuit line stub attached to the transmission line to absorb even harmonics may have a wavelength of a. 1:41 wavelength b. Â ½ wavelength c. Â ¼ wavelength d. 1/6 wavelength 272. Nitrogen Gas in RF transmission lines is used for concentric. Keep moisture out b. Preventing c oxidation. Acting as an insulator d. Both A and B 273. If a transmission line has a power loss of 6 dB per 100 feet, which is the power of the feed point to the antenna at the end of a 200 feet powered by a 100-watt transmitter ? a. 70 Watt b. 50 watts c. 25 watts d. 6 watts 274. Two adjacent minimum of a grooved line is 20 cm away. Find the wavelength that a speed factor of 95%. a. 38 m b. 43.7 m c. 46 cm d. 40 cm 275. What would be the impedance of the approximate series of a quarter wave matching line used to match a 600 ohm feed to 70 ohm antenna? a. 205 ohms b. 210 ohms c. 25.88 ohms d. 102.5 Ohm 276. Which of the following represents the best SWR? a. a. B. 1: 2 c. 1:15 d. 2: 1277. Reflectometer display from optical domain shows a discontinuity 1.4 microseconds from the beginning. If the line has a speed factor of 0.92, how far is the fault from the reflectometer? a. 168 m b. 193.2 m c. 210 m d. 386 m 278. A high SWR creates leaks in a transmission line. A permanent high wave ratio could be caused by a. REPORT OF TERRENCE BETWEEN PRIMARY AND SECONDARY IN THE TANEL PLASTER B. Current flow of the screen grid c. An antenna electrically too long for its d frequency. A 279 impedance mismatch. A transmission line properly connected to. It is grounded at the end of transmitter b. It is cut to a harmonic of the frequency of the courier c. It is cut to a uniform harmonic of the frequency of the courier d. It has a standing wave ratio as close as 1: 1 as possible to 280. If a transmission from one wavelength is shorted at one end, the impedance to the contribution will be a. Zero b. Infinite c. Decreased d. Increase of 281. The characteristic impedance of a transmission line does not depend on its a. Length b. Diameter of conductor c. Conductor spacing d. None of the previous 282. Which of the following statements is not a common transmission line impedance? a. 50 ohms b. 75 ohm c. 120 ohm d. 300 ohm 283. A ratio expressing the percentage of incident voltage reflected on a transmission line is known as a. Speed factor b. Ratio per standing wave c. Reflection coefficient d. Efficiency of line 284. A serial tuned circuit operating at a frequency of 1 GHz shall be constructed from a short section of the teflon-dielectric coaxial cable. What length should be used? (dielectric ratio = 2.1) a. 0.325 m b. 0.10 m c. 0.217 m d. 0.143 m 285. A 75 Ohm line is terminated at a 30 Ohm resistor. Find the SWR. One. 0.6 b. 0.429 c. 2.5 d. 0.4286. A generator sends 50 mw along a 50 ohm line. The generator is matched to the line but the load is not. If the reflection coefficient is 0.6, how much energy is reflected? a. 18 mw b. 20 MW vs. 30 mw d. 32 MW 287. At very high frequencies, transmission lines are used as a. Tuned circuits b. Antenna c. Insulators d. Resistors 288. The shielding of the transmission line is grounded to. At the entrance only b. A in both input and output c. Output only d. If the antenna is a Marconi 289 design. A quarter-shaped line short-circuited at the operating frequency acts as a (a) a. Resonance circuit series B. Parallel resonance circuit c. Capacitor d. Inducer 290. A transmitter is needed to supply 100 W to an antenna through 5 m of coaxial cable with a loss of 3 dB/100 m. What should be the output power of the transmitter, assuming the line is matched? un. 136 w b. 153 w c. 151 w d. 116,815 W A generator sends 50 mw along a 50 ohm line. The generator is combined with the line but the load is not. If the reflection coefficient is 0.25, how much energy is dissipated in the load? a. 46,9 MW b. 37,5 MW c. 3.125 MW d. 12.5 MW 292. Determine the D of an antenna if it has a bandwidth of 0.06 MHz and is cut at a frequency of 30 MHz. a. 50 b. 100 c. 150 d. 250 293. The. The.the disadvantage of the two-hole directional coupler is a low directional connector b. poor directivity c. high swr d. narrow bandwidth 294. a short half wine line to the frequency of operation acts as a (a) a. capacitor b. inductor c. series resonance circuit d. parallel resonance circuit 295. a load impedance of 100 + j25 ohm is normalized on a line of 100 ohms. the normalized value is a. 2 + j0.5 ohms b. 0.25 – j1 ohms c. 0.94 – j24 ohms d. 1 + 0.25 ohms 296. a model of voltage and current variations along a transmission line not finished in its characteristic impedance is called a. electric field b. radio waves c. standing waves d. magnetic field 297. A 75-j50 ohm is connected to a coaxial transmission line of zo = 75 ohm, to 10 ghz. the best method of correspondence is to connect a short-circuited acrobatic to the load b. an inductance to the load c. a capacity at a certain distance specified by the load d. a short-circuit case at a certain distance specific to the load 298. calculates the observed impedance looking in a line of 75 ohms long 1 m finished in a load impedance of 100 ohms, if the line has a speed factor 0f 0.8 and operates at a frequency of 30 mhz. a. 72 – j21 ohms b. 75 – j25 ohms c. 40 – j30 ohms d. 50 – j25 ohms 299. the velocity factor of a transmission line a. depends on the dielectric of the oate material b. increases the speed along the transmission line c. is regulated by the skin effect d. is higher for a solid dielectric than for air 300. a transmitter provides 50 w to a load through a line with a 4:1 swr. finds the power absorbed by the load. a. 44.4 w b. 5.6 w c. 32 w d. 18 w questions and answers in basic transmission systems: follow the list of multiple choice questions in this new series: mcq according to the transmission principles part 1: mcq from number 1 – 50 answer: part 1 part 2: mcq from number 51 – 100 key answer: part 3: mcq from number 101 – 150 response