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This set of MCQs electronic devices and chains focuses on the analysis of the AC of the small signal of low-frequency common transistor emitters. 1. The specificity of the approximate transistor model (a) it helps in faster analysis b) it provides individual analysis for different configurations c) it helps in dc analysis d) ac analysis is not possible View AnswerAnswer: Explanation: A small signal model helps in faster analysis of the ac transistor. The model is applicable to all configurations. The DC analysis is not obtained using a small transistor signal model. 2 Transistor has hfe-100, hie-2k, hoe 0.005 mmhos, hre-0. Find an impedance outlet if the resistance guy is 5k. a) 5 kh b) 4kz in) 20 kh d) 15kz View AnswerAnswer: b Explanation: $RO'/hoe'1/0.005m .20k. ROIS RO RLI 5 \times 4k$. 3. The CE amplifier bypassing the capacitor on the resistance of the emitter has (a) increased resistance to input data and increased voltage gain (b) increased resistance of input data and reduced voltage gain (c) reduced input resistance and increased voltage gain View AnswerAnswer: c Explanation: When a transistor goes with a capacitor, it is a short circuit in a small signal analysis. Resistance to the entrance becomes R'hie. The value of the entry resistance is decreasing, and profits will now increase. 4. Transistor has hie (2k), hoe and hfe-60 with unsurpassed Re'1k raditor resistor. What will be the resistance of input and resistance to the exit? a) 90k and 50k, respectively b) 33k and 45k, respectively, c) 6k and 40k, respectively d) 63k and 40k, respectively, View AnswerAnswer: d Explanation: As the emitter is unsurpassed, input resistance R'hie Exitable resistance $RO-1/hoe-1/25M'40k$. 5. The transistor has hie (1K) and hfe-60 with re'1k resistor resistor bypassor. What will be the resistance of input and resistance to the exit? a) 90k and 50k, respectively b) 33k and 45k, respectively, c) 6k and 40k, respectively d) 63k and 40k, respectively, View AnswerAnswer: d Explanation: How the emitter bypasses, input resistance R'hie . Output resistance ro-1/hoe, but the value is not given. Thus, the hoe No.0 and $RO-1/0 \infty$. 6. In this diagram, find the equivalent resistance between nodes A and B. a) 100 k b) 50 kh in) 40 kz d) 60k e View AnswerAnswer: b Explanation: RAB-RO 100 (RS'hie/1'hfe) 100 (9 x 1/100) From 100 to 100 euros 100'50. 7. Which of the following acts as a buffer? (a) COSILLE CC (b) CE amplifier (c) CB d) Cascading View Answer Answers: Explanation: Increased voltage of the general collector amplifier is unity. It is then used as a buffer. The CC amplifier is also called a follower of the emitter. Although no made, the output will be stabilized. 8. Which of the following faithful? a CC amplifier has a large current amplification b) CE amplifier has a large current amplification c) CB has a low voltage get d) CC amp has a low current amplification View AnswerAnswer: b Explanation: THE CE amplifier has high current and voltage benefits. The CC amplifier has a unity of voltage amplification that cannot be considered as high. The overall base amplifier has a unity of amplification current and high amplification voltage. 9. In the NPN silicon transistor, α 0.995, IE-10mA and ICBO-0.5a leak current. Identify ICEO. a) 10 b) 100 zA d) 500 th Vid AnswerAnswer: b Explanation: $IC-\alpha IE ICBO 0.995 \times 10 mA 0.5 e 9.9505 mA$. IBSIE-IC-10-9.9505-0.0495mA. $\beta-\alpha/(1-\alpha) - 0.995/(1-0.995) - 199 ICEO -9.9505-199-0.0495-0.1mAz 100-10$. In the central bank configuration, the value α 0.98A. The voltage drop of 4.9 Vd is obtained through a 5K resistor when connected to the collector chain. Find the base current. a) 0.01mA b) 0.07mA c) 0.02mA d) 0.05mA View AnswerAnswer: c Explanation: C Explanation: C Explanation: Here, $IC-4.9/5K-0.98mA \alpha$ and IC/IE. Thus, $IE-IC/\alpha 0.98/0.98-1ma$. IBSIE-IK-1-0.98-0.02 mA. Sanfoundry Global Education - Educational Series - Electronic Devices and Schemes. To practice MC on all areas of electronic devices and circuits, here's a complete set of 1000 multiple question-and-answer choices. Participate in the Sanfoundry Certification Competition to receive a free certificate of merit. Join our social networks below and stay up to date with the latest contests, videos, internships and vacancies! Manish Bhojasia, a technology veteran from 20 years and Cisco Wipro, is the founder and CTO at Sanfoundry. He is a Linux Kernel Developer and SAN Architect and is passionate about developing competencies in these areas. He lives in Bangalore and conducts focused training for IT professionals in Linux Kernel, Linux Debugging, Linux Device Drivers, Linux Networking, Linux Storage, Advanced C Programming, SAN Storage Technologies, SCSI Internals and Storage Protocols such as iSCSI and Fiber Channel. Stay in touch with it - LinkedIn Instrumentation Tools helps you with a complete guide to objective questions that are mainly focused on applicants for electrical, electronics, communications and instrumentation engineering streams to crack competitive exams and prepare for the top MNC companies written tests. Here's the final list of electronic quiz devices and MC electronic devices that guarantee a sail through to the next level as the questions have been prepared strategically. In case you have recently attended any competitive exams or interviews or you have additional questions besides what we have reviewed, we encourage you to post them on our Tool Forum to discuss this further. Electronic Devices quiz - Electronic Devices MKH Electronic - Chains Objective questions and answers, Electronic devices and MC chains, Electronic Electronic - Circuit tests, electronic devices and circuit quizzes. We have prepared questions for your practice on several questions about electronic devices and circuits. This section of the quiz consists of 50 questions. Each question carries 1 point. There are no negative points for wrong answers. You need to score at least 50% to pass the quiz, i.e. 25 points. You can get detailed quiz answers after submitting all the questions. All the best. Click on the button below to run the quiz. Share your feedback on the Practical Tests quiz on : Basic Electronics Analog Electronics Digital Electronics Control Systems Go to content ques.1. The Silicon Controlled Fictio (SCR) is the 14th unijunction device with three connection devices with 4 connection None of the above Response.2. Device with three connections Explanation: - Silicon controlled fixer or semiconductor-controlled fixer represents 4-layer solid-state current-controlling unidirectional devices (i.e. can conduct current only in one direction). The Silicon Control Cleaner (SCR) consists of four layers of semiconductors that form NPNP or PNP structures with three P-N compounds labeled J1, J2 and J3, and three terminals. Silicon is used as an internal semiconductor, to which appropriate underpants are added. The compounds are either diffuse or fused (the alloy represents if it is a mixed semiconductor or mixed metal). The SCR anode terminal is connected to the PNP p-type material, and the cathode terminal is connected to the n-type layer. SCR is connected to a p-type material close to the cathode. Ke.2. tyristor is basically a PNP device Combination of heart and triac set SCR, cardiac and triac response.1. PNP Device Explanation:- The thyristor is also called a silicon-controlled rectifier (SCR), a mostly four-layer three-layer pnpn device. It has three terminals: anode, cathode and gate. It is basically an electronic switching device that can remain in conduct (included) and non-conductive (OPI-) State. However, it is a unidirectional device and can only hold in one direction as a diode. The switching state of the device can be controlled by one of its terminals. A terminal connected to the end of the p-region is called an anode (A), a terminal connected to the end of the n-region is called a cathode (K), and a terminal connected to a middle p-region is called a gate (G). The tiristor is produced by spreading four layers of impurities (p and n-type) into a silicon plate of suitable thickness. The entire assembly of the tiristor is mounted on a heat resistant with a thread. The purpose of the heater is to dissipate the heat generated in the tyristor. What is the semiconductor power device of the following is not launch device? Thyristor Triac G.T.O MOSFET Answer.4. UPDATE MOSFET:- Current Devices Current Device Device that requires a permanent current drive for a certain period of time in order to initiate and/or remain in the hold. Two popular types of current controlled power transistor and tyristor (SCRs) devices. SCR is mainly used in AC-DC converters, such as controlled straighteners. In DC-AC inverters, the optoors switch off the gate (GTOs) are generally used because of their ability to be both turned and turned off the gate control signal. Thyristors and GTOs are still dominated by high voltage and high current applications like dc transmission, requiring converters to the megawatt range. Voltage-driven devices, these devices are semiconductors that require constant voltage drive at the gate control terminal to stay in operation. The drive requirements of these devices are much lower than their current counterpart, and are the preferred choice in modern electronics. Two such power devices are MOSFET and IGBT, which are forced by switching devices completely controlled by terminal gates under normal operating conditions. These devices do not latch into the conductive and therefore do not require special switching schemes. The entrance interchange of the MOSFET and IGBT gates is purely capacitive, so in a stable state, unlike transistors, no gate drive current is required. The minimum gate drive voltage, however, must be maintained (above the gate threshold voltage) at the device gate to remain in conducting. High current low drive speed impedance is needed to inject or remove the current, from gate slew rates to switch the device quickly. MOSFET MOSFET abbreviated Metal Oxide Semiconductor Field Effect Transistor is another semiconductor device such as BJT, which can be used as an amplifier or switch. Like BJT, MOSFET is also a four-century device; however, the way MOSFET works is completely different from the BJT principle. The three MOSFET terminals are called Drain (D), Source (S) and Gate (G), as shown in the figs. Of these, the terminal gate acts as a controlling terminal. As shown in the pic, in BJT output current, IC is controlled by the basic current IB. Consequently, BJT is the current controlled device. On the other hand, in MOSFET, the voltage between the gate and the source (VGS) controls the drainage identifier. Thus, MOSFET is a voltage controlled device. The name fields stem from the fact that the output flow is controlled by an electric field installed in the device by externally applied voltage between the gate and the original terminal. Which of the following includes terminal for synchronization purposes? Diack Triak SUS None of the above Answer.3. UPDATE SUS: - Proper work of electric ac-net converters requires the use of synchronized devices to accurately determine when the feed voltage passes through zero. This group of power electronic converters includes thyristor and transistor controlled fixes, regulators, converters for active power factor correction, matrix converters. The Silicon One Switch (SUS) Silicon One-Switch (SUS) is similar to the PUT (Programmed Unijunction Transistor), except that it has an internally constructed low-voltage avalanche diode between the gate and the cathode. The SUS symbol and its equivalent diagram are shown in rice. Its anode-to cathode electric feature is shown in rice. b for no external connection to the gate terminal because of the avalanche diode present, the SUS turns ON for the fixed voltage of the anode gate. SUS is commonly used in the main relaxation oscillator circuit. The main difference in function between SUS and UJT in the relaxation oscillator circuit is that SUS switches to a fixed voltage determined by its internal avalanche diode rather than a fraction of the lower voltage. It should also be noted that the current switch is much higher in SUS than in UJT, and also very close to it. These factors limit the upper and lower frequency limits or time delays that are practical with SUS. To synchronize, block, or force switch, displacement or momentum signals can be applied to the SUS gate terminal. The silicone one-way switch is used mainly in synchronization of logic and trigger schemes. The SUS rating is about 20 B, 0.5 A. Since the device will be switched on for a fixed voltage anode gate. The device can also be used as a relaxation oscillator. Weekend pulses are used to launch CRS. At the end of each half of the cycle, each SCR will cease to hold as holds as the potential difference between it drops to zero, and so the voltage pulse should be applied to its gate if necessary for holding over the next half of the cycle. A triak or SUS can be used as an alternative to THE SCR. This device acts as two SCRs connected in reverse parallel and, if throbbred with variable power, will hold in both phases of the AC cycle. Like the SCR, the device will hold only when the voltage is not on zero volt and the device has been pulsed. During exposure the timer simply requires applying a sequence of synchronized pulses to the device gate at a time, slightly later than zero, to turn them back on and ensure they continue At the end of the exposure, these pulses stop and the device stops at the end of the next half of the cycle. The system ensures the accuracy of a single voltage pulse (i.e. exposure time 0.01 seconds in the case of a two pulse block, or 0.002 seconds in the case of a medium-frequency unit. The advantage of SCS over SCR is slow switching time and big VH Slow switch time and less switch time and less switch time and less switch time and less switch time and a large VH Answer.3. Faster time switching and smallerVH Explanation:- Silicon Controlled Switch (SCS) is a thyristor tetrod. That is, it has four electrodes It has an anode gate (AG) like PUT and cathode gate (KG) like SCR. The current of effective size on both gates will shoot SCS. A large reverse current through the anode gate can be used to turn off the SCS. Its use is largely in suspense or current sensing circuits as signals on both gates fire it. It works like a gate or. its power capacity is limited by the timing, logic, and launch of applications. The advantage of SCS over the corresponding SCR is the shortened shutdown time, usually in the range of 1 to 10 for SCS and 5 to 30 for SCR. Some of the remaining benefits of SCS over SCR include increased control and causing sensitivity and a more predictable firing situation. For the time being, however, SCS is limited by low power, tone and voltage ratings. Typical maximum anode currents range from 100 mA to 300 mA with scattering (power) from 100 mW to 500 MW. The SCS application is a low power device compared to the SCR. The SCS power rating is very low compared to the SCR. SCS processes current in the mA range. But it has the advantage of a faster turn off. The applications of SCR and SCS are the same. SCS is sometimes used in digital applications such as meters, registers, and various synchronization schemes. The tyristor equivalent of a tiratron tube is a controlled Diac Triac Silicon None of the above answer.3. Silicon Controlled Refier Explanation: - The history of the Power Amplifier Electronics originated in the early 19th century with the development of mercury arc straighteners. Mercury-arc rectifier or mercury-steam valve is a type of electric straightener that is used to convert high voltage ac into dc voltage. They were very useful for providing electricity to industrial engines, electric railways and electric locomotives, as well as high-voltage direct current (HVDC) electricity transmission. In 1900, 1903 and 1908, mercury arc purifiers with a glass shell, mesh controlled mercury-arc straighteners and mercury-arcs with a metal shell respectively were developed. The Tiratrons, i.e. the arc cleaner of hot cathode mercury with mesh control, were developed by Langmuir in 1914. Tiratron is a type of gas-filled tube that is used as a high voltage electric switch and Rectifier. Typically, tiratrons are produced as triodes, tetraodes and pentodes. Due to mercury or neon or xenon gas fumes, Tiratrons can be much more currents. In 1925, the first solid device, a selenium straightener, without a glass tube was developed. The selenium straightener is also known as a metal straightener. The selenium straightener is an early type of semiconductor straightener in which the semiconductor is copper oxide or selenium. This device is used in phase-controlled converters, inverters, chargers, and cyclo converters. In 1930, Rissik developed cyclo-transformers, i.e. variable frequency voltage from fixed frequency input voltage. In 1933, Lenz developed a voltage regulator or controller using solid-fuel power devices. In 1947, the point contact transistor was developed by W. H. Bratten, J. The bipolar transistor compound (BJT) using Germany was invented in 1948, and this was the beginning of a new era of semiconductor electronics. The size, cost and power consumption of solid-fuel power devices have been significantly reduced, and at the same time a study is under way to develop equipment with greater complexity and more power. The germanium 100A diode was developed in 1953. The new revolution began in 1956 with the development of a tiristor, a four-layered silicon device called PNP. The most popular semiconductor device of the thyristor family is the SCR, which was introduced by General Electric in 1957. The tiratron is a gas-filled vacuum tube that acts as a switch. Like the action of a silicon remitator, after firing a small signal, it continues to hold until the current stream is interrupted. Silicon-driven rectifier: A solid state controlled purifier is commonly used as an electronic switch, like a super-fast relay. Small current fires or causes the device, causing it to hold freely. It looks like a tiratron tube. The Triak is a 2 terminal switch 2 terminal two-way switch 3 terminal two-way switch 3 terminal dual-directional switch Answer.4. 3 Terminal bidirectional switch Explanation: - The main drawback of SCR is that it can only conduct current in one direction. Thus, SCR can only control DC power or forward biased semi-cycles ac in load. However, in the a.c system, it is often desirable and necessary to control both positive and negative semi-cycles. This uses a semiconductor device called triac. The Triak is a three-thousand-year-old AC switch that triggers when a low-energy signal is applied to its gate terminal. Unlike the SKR, the triak holds in any direction when switched on. The trial also differs from SCR in that it either has a positive or negative gate signal him in conductivity. Thus, the triak represents a 3 terminal, four-layer, directional, semiconductor device that controls ac power, while the SCR controls the power of DC or forward biased semicycle semicycles In load. Because of its bidirectional conductivity properties, the triak is widely used in the field of electronics power for management purposes. Triac is an acronym for the three terminal ac switch. 'Tri' indicates that the device has three terminals

and 'ac' indicates that the device controls a variable tone or can hold in any direction. Triac is equivalent to two thyristors connected back to back with bound gate terminals. When MT2 is positive against MT1, SCR 1 is forward biased. If the gate is made positive in relation to MT2, SCR 1 conducts and the device moves from a state of high intransigence to a low state. When the MT1 is positive against MT2, SCR 2 is forward biased and it holds when the gates are made positive. Thus the triac can conduct in both directions. The SKR requires a positive tension between the gate and the cathode. But the triac can be carried out either with a positive or with negative tension at the gate. Ke.8. Fig. Below is a triac thyristor diode trigger straightener None of the above Answer.2. Diac Trigger Explanation:- DIAC Diac is usually used to run triac. The diode with two electrodes is a bidirectional avalanche diode, which can be turned off from state to state, necessary for the polarity of the applied voltage. It's just like a triac without a terminal gate, as shown in the picture (a). Its equivalent scheme represents 100 inverted four-layer diodes. Figure (b) shows two schematic symbols. Again, the terminal designations are arbitrary, as diac, like the triac, is also a two-way device. Switching from state to state is achieved by simply exceeding the voltage of an avalanche failure in any direction. Diac Building A diac is a r-r-r structured four-layer, two-terminal semiconductor device as shown in the picture (a). THE MT2 and MT1 are the device's two main terminals. In the diagram, diac unlike diode resembles a bipolar transistor connection (BJT), but with the following exceptions. (i) There is no terminal attached to the middle layer (ii) three areas almost identical in size (iii) to the level of doping at the two ends of the p-layers the same, so that the device gives symmetrical switch characteristics for any polarity of applied voltage. (iii) The level of doping at the two ends of the p-layers is the same, so that the device gives symmetry to switch characteristics for any polarity of applied voltage. Diac is a five-layer four-layer connection device. The word diac can be divided into DI and AC. DI means two electrodes, namely MT1 and MT2. THE CONDITION indicates its ability to conduct in both directions. From a structure, the equivalent scheme can be drawn with two PNP devices, back to back. When MT2 is positive against MT1, device 1 is forward biased. When mt1 is positive in relation to MT2, device 2 is Biased. Ke.9. Triple frequency of the six-step semi-wave straightener for 220 W, 60 Hz input will be 2160 Hz 720 Hz 360 Hz 60 Hz Answer.3. 360 Hz Explanation:- Six phases of half wave straightener or 3 Phases Full Wave Cleaner In three phases full wave amplifier, six diodes are used. It is also called a 6-diode semi-wave straightener. In this, each diode holds for 1/6th part of the AC cycle. The three-stop full-wave chain is often used instead of three-century-old half-waves, when less ripples are required and the static magnetization of the transformer nucleus should be avoided. Six-step voltages can be obtained in the secondary by the center tapped arrangement on a star connected by three phases of winding and a vector chart of six phase stresses shown in the pic. There are six diodes in the six-step straightener. When a certain phase voltage is higher than other phases, diodes are at a specific phase of behavior. This straightener diagram is also called a three-step six-pulse middle point straightener. Each diode lasts for $\pi/3$ or 60 duration. The current flows through one diode at a time. Thus, the average current is low, but the ratio between the maximum current and the average current in diodes is high. Thus, the use of a secondary transformer is poor. Dc currents in the secondary part of the six-step star fictitious can be reversed in secondary windings and the saturation of the nucleus is not found. The frequency of the wave frequency of the six-step semi-wave straightener is six times the frequency of deliveries. Thus, since the delivery frequency is 60 Hz, the pulsation rate is 6×60 Hz and 360 Hz. The minimum duration of pulse in the pulse trigger system for the thyristors should be at answer.1. Explanation 10:- Thyristors and triacs can be caused by a single impulse, a pulse train, or a steady d.c voltage on the gate. Pulse is most commonly used; eponymous triggers are used in specific applications and low-cost systems, and d.c. trigger only in cases of difficulty in reaching the current latch. The thyristor or triac with anode is positive in relation to the cathode, and with adequate gate drive, will turn on for 10. The conduct will continue regardless of the current load as long as the drive gate is present. The hold will continue after the gate disk stops only if the load current has reached the level of fixation. The trigger pulse is preferable to a DC start-up for general use, because the gate scattering is lower and the trigger system is easier. Both pulse and d.c. trigger systems must be synchronized with the supply of the basics, and both use an pulse generator running through variable latency to control the trigger angle needed to control the phase. While in the system Triggers exiting the pulse generator can be transmitted by the gate of the thyristor through the isolating transformer, the trigger system d.c. d.c. either fix the power transformer output or drive an extra supply of pulse transformer to provide a D.C. gate drive. A simple trigger diagram for thyristors and triacs can be built with the help of the heart. Diac represents a three-layer device and therefore, strictly speaking, not a thyristor. Its function, however, is like a trigger device for thyristors, and it is usually seen with these devices. Pages: 1 2 3 4 5 6 7 8 9 10 Scroll back to the top apk para ver tv en vivo gratis. apk para ver tv en vivo gratis 2019. apk para ver tv en vivo gratis 2020. ver tv en vivo gratis por internet apk

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