کارشناسی

حضرت على(ع): ارزش هر كس به ميزان دانايي و تخصص اوست



سری سوال: یک ۱

زمان آزمون (دقیقه): تستی: ۵۰ تشریحی: ۵۰

تعداد سوالات: تستى: 25 تشريحي: ۵

رس : زبان تخصصی

رشته تحصیلی/کد درس: مهندسی برق-قدرت،مهندسی برق - مهندسی پزشکی (بیوالکتریک)،مهندسی برق-کنترل،مهندسی برق-مخابرات،مهندسی برق-الکترونیک۱۳۱۹۰۲۴

1-Which one defines best the word "electronics"?

- 1. the branch of science and technology that manages the flow of power
- 2. the branch of science and technology that deals with the controlling the flow of information
- 3. Electronics deals with digital circuits.
- 4. the branch of science and technology that deals with semiconductors

2-The basic job(s) of the electrical devices is(are):

- 1. Distributing electrical power
- 2. Managing the flow of power and information
- 3. Generating, distributing and converting electrical power
- 4. Distributing and protection of electricity

3-All electrical circuits have the following elements:

- 1. Source of voltage, protection devices, load, control and ground
- 2. Switches, wires, protection devices, light and power
- 3. Switches, control buttons, display
- 4. 2 and 3

4-Basic types of circuits are:

- **1.** Series and parallel
- 3. Power and control circuits

- 2. Active and passive circuits
- 4. Series, parallel, series-parallel

5-Which of the followings defines KCL?

- 1. The sum of the voltage drops around any loop is zero.
- 2. The sum of the currents into any node of a circuit is zero.
- 3. The current through a series of elements is the same.
- 4. The sum of the current drops around any loop is zero.

6-Basic linear analog circuit components are:

- 1. Resistor, capacitor, and inductor
- 2. Switches, active components, passive components
- 3. Resistor, capacitor, inductor, transformer
- 4. 2 and 3

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15-Biasing an electronic device means:

- 1. Turning on the device
- 2. Moving it out of its operating point by applying an ac voltage
- 3. The dc voltages and currents applied to it to set up the desired dc operating point
- 4. Decoupling it from other parts of the circuit

16-What is the job of a clipping circuit?

- 1. To remove an ac signal from the circuit
- 2. To add or subtract a dc voltage to or from an ac signal
- 3. To change an analog signal to digital
- 4. To keep an ac signal between a maximum and or a minimum voltage

17-Why are FETs known as unipolar devices?

- 1. Because only one pole is detected on its terminals.
- 2. Because they operate only with one type of charge carrier.
- 3. Because they work upon the field effect property.
- 4. Because they have only one major carrier.

18-The word "swing" in "The input signal voltage causes the gate-to-source voltage to swing..." means:

- 1. Drift below
- 2. Move in a curve 3. Turn off
- 4. Drift above

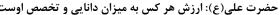
19-How is an op-amp used as single-ended input?

- 1. Only one end of the input signal is connected to the op-amp, and the other is left free.
- 2. The input signal is applied between two inputs and extracted from one output.
- 3. The input signal is applied at both inputs and extracted from one output.
- 4. The input signal is connected to one input with the other input connected to ground.

20-"common-mode rejection" in op-amps is defined as:

- 1. The ratio of the difference gain to the common gain
- 2. The amount of noise rejection when it is used in common mode
- 3. The gain of the common mode
- 4. The rejection rate of the device when it is fabricated

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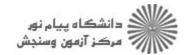


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از ۵ المار ۱۳۹۰ المار ۱۳۹۰ ۱۳۹۰ صفحه ۱۴ و ۱۳۹۰ صفحه ۱۲ و ۱۳۹۰ المار ۱۳۹ المار ۱۳۹۰ المار ۱۳۹۰ المار ۱۳۹۰ المار ۱۳۹۰ المار ۱۳۹ المار ۱۳۹۰ المار ۱۳۹۰ المار ۱۳۹۰ المار ۱۳۹۰ المار ۱۳۹۰ المار

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28-Fill in the blanks with the correct form of the words given in the brackets.

<u>نمره ۱</u>

- b. The 555 IC can operate as an oscillator. This mode is known as(stable).
- c. The 555 IC can act as a flip-flop. This mode is called(stable).
- d. A(stable) circuit produces one pulse of a set length in response to a trigger
- 29-Translate the following paragraph into Persian.

مره ۲

Digital integrated circuits are miniature, low-cost electronic circuits whose components are fabricated on a single, continuous piece of semiconductor material and interconnected in such a way that they perform a high level function. Such circuits, first introduced in 1958, have had a profound impact on the electronics industry; in fact, both Business Week and Scientific American have referred to the effect of integrated circuits

- " · Translate the following paragraph into English:

ا نمره

وظیفه اولیه واحد محاسباتی – منطقی عبارت است از اجرای عملیات محاسباتی و منطقی. دستورالعمل های محاسباتی محاسباتی محاسباتی محاسباتی محاسباتی محاسباتی عبارتند از دستورالعملهای جمع، تفریق، افزایش و کاهش. دستورالعملهای افزایش و کاهش، مقدار ۱ را به محتویات یک رجیستر ریزپردازنده یا محلی در حافظه اضافه یا از آن کم می کنند.