

Correction of the second English exam

(Fourth year/ electrical engineering)

Part one:

1/ say whether the following statements are true or false (3pts)

a/ true

b/true

c/false

2/ answer the following questions (3pts)

a/ is it true that regardless the various kinds of diodes they function the same? Justify?

No, they don't. Justification: there are different kinds of diodes and each type has its own applications.

b/ what is the function of diodes?

Diodes are used to protect circuits by limiting the voltage and to also transform AC into DC.

c/ what does the arrow in the diode illustrate?

The arrow in the diode symbol represents the direction of conventional current flow when the diode conducts

3/find in the text words that are close/ opposite in meaning to the following words (2pts)

Exemplifies =represents normal=conventional harm=/=protect block=/=transmit

Part two:

1/ classify the following words according to their belongings (2pts)

Electronic devices: computer- mouse- landline

Electric devices: plug

2/ translate the following words: (4pts)

a/ power supply... ماخذ كهربائي

b/ discharge... تفريغ الشحنة...

c/ made circuit..... دائرة مغلقة.....

d/ specific resistance..... المقاومة النوعية...

3/ fill in the gaps by using the appropriate word (6pts)

flow1- insulator2- capacitor3- Material4- capacitance5- - dielectric6

Text

The capacitor is a component which has the ability or "capacity" to store energy in the form of an electrical charge producing a potential difference (*Static Voltage*) across its plates, much like a small rechargeable battery. There are many different kinds of capacitors available from very small capacitor beads used in resonance circuits to large power factor correction capacitors, but they all do the same thing, they store charge.

In its basic form, a capacitor consists of two or more parallel conductive (metal) plates which are not connected or touching each other, but are electrically separated either by air or by some form of a good insulating material such as waxed paper, mica, ceramic, plastic or some form of a liquid gel as used in electrolytic capacitors. The insulating layer between a capacitors plates is commonly called the Dielectric.

Due to this insulating layer, DC current cannot flow through the capacitor as it blocks it allowing instead a voltage to be present across the plates in the form of an electrical charge. The conductive metal plates of a capacitor can be either square, circular or rectangular, or they can be of a cylindrical or spherical shape with the general shape, size and construction of a parallel plate capacitor depending on its application and voltage rating.

When used in a direct current or DC circuit, a capacitor charges up to its supply voltage but blocks the flow of current through it because the dielectric of a capacitor is non-conductive and basically an insulator. However, when a capacitor is connected to an alternating current or AC circuit, the flow of the current appears to pass straight through the capacitor with little or no resistance.

The flow of electrons onto the plates is known as the capacitors Charging Current which continues to flow until the voltage across both plates (and hence the capacitor) is equal to the applied voltage V_c . At this point the capacitor is said to be "fully charged" with electrons.

adopted and adapted

Questions:

Part one:

1/ say whether the following sentences true or false. Justify each answer whether true/ false (3pts)

a/ a capacitor is a component which retain energy.....

justification.....

b/ the DC current cannot flow owing to the dielectric.....

justification.....

c/ the current will flow directly only if the capacitor is fastened to an AC.....

justification.....

2/ answer the following questions from the text (3pts)

a/ what forms can the conductive metal plates of a capacitor be found at?

.....

b/ how do we call or name the fluxity of the electrons onto the plates?

.....

c/ what are the various types of capacitors mentioned in the text?

3/ find in the text words that are close/ opposite in meaning to the following (3pts)

composes=..... flux =..... Prevent=.....
release=/=..... conductor=/=..... rigid=/=.....

Part two:

1/ translate the following words in English/ Arabic (4pts)

a/ amplifier operational.....

b/ avalanche diode.....

1/ المقاومة الثابتة

2/ المكثف الكهربائي القطبي

2/ Classify these following words in their right column (2pts)

Electric grill- iron- drill- toaster- plug- computer- mouse- socket

Electrical devices	Electronic devices

3/ fill in gaps with the correct word (5pts)

signal- current- direction-change- amplifiers- rectifiers- type

a diode is a semiconductor device that essentially acts as a one-way switch for current. It allows..... to flow easily in one, but severely restricts current from flowing in the opposite direction. Diodes are also known as because they alternating current (ac) into pulsating direct current (dc). Diodes are rated according to their, voltage, and current capacity.

Best of luck

Correction of the second English exam

(fourth year electrical engineering)

Part one:

1/ true/ false (3pts)

a/ a capacitor is a component which retain energy true

Justification: a capacitor is a component which store= retain energy.

b/ the DC current cannot flow owing to the dielectric true

Justification: Due to this insulating layer = (dielectric), DC current cannot flow through the capacitor

c/ the current will flow directly only if the capacitor is fastened to an AC true

Justification: when a capacitor is connected =fastened to an alternating current or AC circuit, the flow of the current appears to pass straight through the capacitor

2/ answer the following questions from the text (3pts)

a/ what forms can the conductive metal plates of a capacitor be found at?

The conductive metal plates of a capacitor can be either square, circular or rectangular, or they can be of a cylindrical or spherical shape

b/ how do we call or name the fluxity of the electrons onto the plates?

The flow =(fluxity) of electrons onto the plates is known as the capacitors Charging Current

c/ what are the various types of capacitors mentioned in the text?

There are many different kinds of capacitors available from very small capacitor beads used in resonance circuits to large power factor correction capacitors.

3/ find in the text words that are close/ opposite in meaning to the following (3pts)

composes= consists/ flux = flow / release=/= store /conductor=/=insulator/prevent=/=block/rigid=/=liquid

Part two:

1/ translate the following words in English/ Arabic (4pts)

a/ amplifier operational → المضخم/المكبر العملياتي

b/ avalanche diode → صمام الانهيار

المقاومة الثابتة → static resistance

المكثف الكهربائي القطبي → **Electrolytic capacitor**

2/ Classify these following words in their right column (2pts)

Electric grill- iron- drill- toaster- plug- computer- mouse- socket

Electrical devices	Electronic devices
Iron- socket- toaster- plug- drill	Electrical drill- computer- mouse-

3/ fill in gaps with the correct word (5pts)

current1- direction2- rectifiers3- change4- type5