

Electronics paper 1

Q1)A)

04

Select the correct alternative and rewrite the sentences:

1) components may be used for amplification, rectification or to change energy from one form to another.

A)Active b)Passive c) Discrete

2)Actual physical size of the resistor indicatesrating.

a)Resistance b)Voltage c)Power

3)Capacitance of a capacitor is inversely proportional to the

a)Dielectric constant b)Area of plates c)Thickness of the Dielectric

4)..... is a solderless board.

a)PCB b)Breadboard c)Tag board

B)Attempt any two of the following:

06

1)What do you mean by active and passive components.

2)State the specification of resistor.

3)Draw the colour code table used for calculation of Resistor.

Q2)A) Attempt any two of the following:

06

1)Define Self Inductance and mutual Inductance.

2)Define Time Constant .

3)write a note on types of Inductor.

B) Attempt any one of the following:

04

1) Draw the resistor family tree.

2)Explain the type of Non linear resistor.

Q3)A) Attempt any two of the following:

06

1)Explain the LDR

Broad: 100

XL - 500 - 03

2) Draw the symbols of three types of Capacitor.

3) If a RC timer of 5 millisecond time constant is connected with a 500pF capacitor in series with a resistor. Find the value of the resistor Used.

B) Attempt any one of the following:

04

1) Explain the types of transformer.

2) Explain the Relay.

Q4) a) Attempt any two of the following:

06

1) Explain the losses in transformer.

2) Three capacitors have capacitances of $4\mu\text{F}$, $8\mu\text{F}$, $2\mu\text{F}$ respectively. Find the total capacitance when they are connected in a) Series b) Parallel

3) Explain the specification of relay.

B) Attempt any one of the following:

04

1) Explain the principle of operation of transformer .

2) Draw the family tree of Capacitors.

Q5) A) Attempt any two of the following:

06

1) Write the colour code of $27\text{k}\Omega$, $68\text{k}\Omega$, $1\text{M}\Omega$

2) Explain the tolerance value of the resistor when the fourth band is not present. in detail.

3) how do we calculate the value of the resistor in detail.

B) Attempt any one of the following:

04

1) Differentiate between Primary Cells and Secondary Cells.

2) Explain the types of the PCBs.