**EXAM GOOD STUDENTS AT THE DISTRICT LEVEL**

**Subjects: natural Science – Physics**

Kien Thiet secondary School

**Question 1**: Instrument for measuring current intensity:………………………………

**Answer**: Ammeter

**Question 2**. Expressions of Ohm's Law:……………………………………………….

………………………………………………………………………………………….

**Answer**: I = 

**Question 3:** The formula of the law of Joune – Lenz:

…………………………………………………………………………………………...

**Answer**: Q = I2.R.t

**Question 4:** When the electric fan is active, power is converted into:

…………………………………………………………………………………………...

**Answer**: Thermal and Mechanical energy

**Question 5:** On the bar magnet, the position attracts iron the most powerful:

……………………………………………………………………………………………
**Answer**: Both poles of the magnet.
**Question 6:** The formula of the equivalent resistance in the circuit suffering serial:

.........................................................................................................................................

**Answer**: R =  *R1 + R2*

**Question 7:** A light bulb has data 220V-100 W. Calculate the resistor the filament of the bulb when it works normal:

…………………………………………………………………………………………..

**Answer**: 484

**Question 8**. For a stage circuit including two resistors R1 = 20 Ω and R2 = 60 Ω , series connection, Equivalent resistance of the circuit:

**Answer**: 80 Ω

**Question 9:** A light bulb has data 220V-1000W. Calculate the power consumption in 1 hour when it works normal.

…………………………………………………………………………………………..

**Answer**: 1kWh

**Question 10:** A guide wire has a length of 20 meters and resistor 40 Ω. Calculate resistance of wire when cutting 10 meters:

……………………………………………………………………………………..

**Answer**: 20 Ω

**Question 11:** The circuit consists of two resistors R1 = 12Ω , R2 = 6 Ωparallel connection . On two points there is voltage Potential difference 12V

a. Calculate the equivalent resistance of the circuit.

b. Calculate the amperage through each resistor and through the main circuit.

c. Calculate the heat dissipated on the circuit for 10 minutes.

**Answer**

1. Equivalent resistance of the circuit stuck in parallel is:

$R=\frac{R\_{1}.R\_{2}}{R\_{1}+R\_{2}}=\frac{12.6}{12+6}=4($Ω)

1. The amperage of the main circuit is: $I=\frac{U}{R}=\frac{12}{4}=3(A)$

Because: R1 parallel R2  so U=U1=U2

The intensity of electric current passing through resistor R1 is:

$$I\_{1}=\frac{U\_{1}}{R\_{1}}=\frac{12}{12}=1(A)$$

The intensity of electric current passing through resistor R2 is:

$$I\_{2}=\frac{U\_{2}}{R\_{2}}=\frac{12}{126}=2(A)$$

1. the heat dissipated on the circuit for 10 minutes is:

Q = I2.R.t = 32.4.(10.60) = 21600 (J)