Rakett 21

TAL TECH

MATERIALS TECHNOLOGY

TASK DESCRIPTION

Create a photoelectric circuit in which a maximum voltage of 2 V and a current of 400 mA would be guaranteed to the consumer of the circuit (e.g. a light bulb). It is possible to connect two different types of solar cells (power sources) to the circuit, the parameters of which are:

1) Type "a" - U = 2V; I = 200mA

2) Type "b" - U = 1V; I= 200mA.

Make three possible circuit combinations following the requirements.

ANSWERS: You can submit your answers in Word, Excel or PDF format. You can also write on a paper and take a photo of the answers. The way of presentation is not important, however it is important to show the solution process and present it clearly and comprehensively. When submitted in handwritten form, the answers must be legible and understandable.

POINTS FOR ASSIGNMENT: Each correct circuit is worth 30 points. Correctness of presentation is worth 10 points. A maximum of 100 points can be obtained in total.

HELPFUL INFORMATION FOR THIS TASK:

	Series circuit	Parallel circuit
Current (I)	I = I1=I2=I3	I = I1+I2+I3
Voltage (V)	V = V1 + V2 + V3	V = V1 = V2 = V3
Resistance (R)	R = R1+R2+R3	$\frac{1}{R} = \frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3}$