

PCB Design Knowledge Test N°01/2020

Moscow, 15.12.20

Lector: Alexander A. Istomin

To-do until 21.12.20

1. You are required to send a well-presented answer sheet in PDF Format written in LaTeX.
Answers in Russian (English allowed) to the following mail address : pcb_ju10@mail.ru
No later than: **Monday 21.12.2020, 19:00 MSK (GMT+3)**
 2. There will be an oral part (Defense) of the exam (15min max.) where you'll have to explain some of your answers (22/23/24.12)
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Q1: The FT245RL Microcircuit in the **Cryptuino01**, when connected to the PC, creates a communication port (COMx under Windows, `/dev/ttyACMx` under Linux).

a) Write down at least three values (max 5) you can send to this communication port, that, if read, will reset the ATTINY.

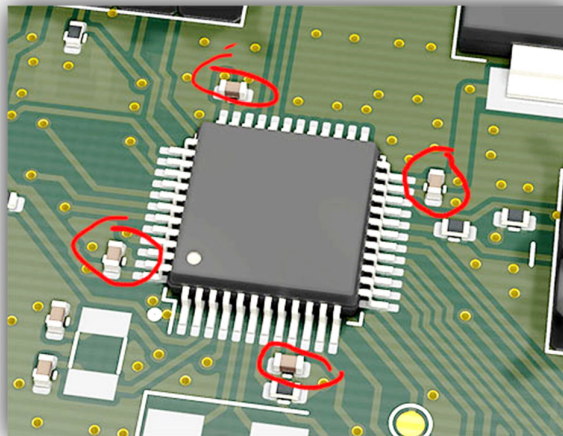
b) Write down also two values that will put the ATTINY in a working state again.

Q2: What are the metric dimensions of a 0201(Imperial) Capacitor?


Q3: What is the standard pitch (there are rare exceptions) for SOIC Chip Pins

Q4: Is the electric schema dependent on a footprint of one or several components?

Q5: What is the function
of these passive components?



Q6: Can a VIA of 0.6mm/0.3mm exist in a NPTH of 0.4mm?

Q7: What is this symbol? : 

Q8: What is Edge.Cuts used for?

Q9: Assume the PCB is in the XY Plane. How does the Z-height of a component influence its footprint?

Q10: How (and where) do I indicate in the Schema Editor (EESchema) that a component is placed on the backside of the PCB?

Q11: BONUS 1: What is a Rats Nest?

Q12: BONUS 2: What is Eco2.User used for?

Q13: BONUS 3: What does the inscription TORQ on a component or a signal line mean (the line on top)?