

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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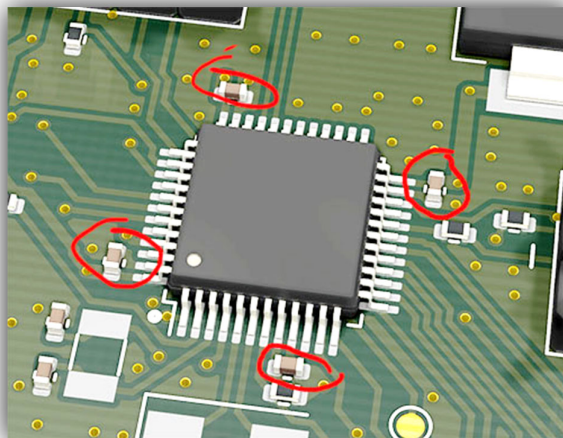
- Q1: The FT245RL Microcircuit in the **Cryptuino01**, when connected to the PC, creates a communication port (COMx under Windows, `/dev/ttyACMx` under Linux).
- a) Write down at least three values (max 5) you can send to this communication port, that, if read, will reset the Atmel 328p.
- b) Write down also two values that will put the Atmel 328P 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)?