

- 1) State the advantages of protoboards.
- 2) State the disadvantages of protoboards.
- 3) State the advantages of printed circuit boards.
- 4) State the disadvantages of printed circuit boards.
- 5) Routing rules for power lines.
- 6) Routing rules for signal lines.
- 7) Express 1 inch (1") in cm.
- 8) Types of components according to the mounting method on the printed circuit board.
- 9) State the parameters of the resistor.
- 10) State the parameters of the capacitor.
- 11) State the reasons and methods of capacitors use on power supply lines of integrated circuits.
- 12) What are via used for?
- 13) List the general features of Circuit Maker.
- 14) Draw the shape and indicate the dimensions of the resistor in the 0603 case.
- 15) What is the disadvantage of a solder (wave) bath and how can it be solved?
- 16) How are the components placed on the printed circuit board?
- 17) What is the function of flux in soldering?
- 18) What is the role of diffuse forces when soldering SMD components?
- 19) What are the most common problems with SMD components in reflow soldering and why do they occur?
- 20) Give examples of soldering wire in the food industry and outside it.
- 21) Explain what the CTRL + M shortcut is used for in Circuit Maker.
- 22) List which measurement systems are supported in Circuit Maker?
- 23) Explain what the shortcut L is used for in Circuit Maker.
- 24) Explain what the shortcut F is used for in Circuit Maker.
- 25) List the types of graphic representation of the printed circuit board and the shortcuts used to call them.
- 26) Explain the role of the commands right click + drag, CTRL + scroll button, SHIFT + right click and 0 in 3D display of the printed circuit board.
- 27) Explain what the shortcut SHIFT + S is used for in Circuit Maker.
- 28) Explain the role of top layer, bottom layer and multilayer.

- 29) Explain the role of overlay, paste and solder layer in the production of a printed circuit board.
- 30) State the ranges of values that are most often used for R, L, C components on printed boards.
- 31) 10 pico is 10 to what power?
- 32) What types of routing are there in Circuit Maker and what are they used for?
- 33) What do gerber and NCdrill files contain and what are they used for?