Print the plant of INESC MN facilities and:\*

Plant can be found here:

<https://drive.google.com/file/d/1jNLWzekV8mi--7lvTZp391ps_UOHrExQ/view>

* name and number the rooms/laboratories
* mark the location of fire extinguishers
* mark the locations of first aid kits
* mark the locations of emergency exits and emergency escapes
* write emergency numbers
* digitize your plant already filled and upload at the end of the quiz
* go to Vania Silverio (Room 110) to discuss the Plant of INESC MN and Safety Procedures @ INESC MN

Select the correct answer(s). How to proceed and whom to contact in case of an emergency (multiple answers can be selected)\*

* if the alarm rings, stay where you are and call your friends to catch up on the conversation
* if the alarm rings, leave the cleanroom immediately, leave the basement by the stairs, Inform the security at the front door and Report the alarm to the Process Engineers, Supervisors, Administrative INESC MN: - file 5, pagina 5
* if you need medical attention, ask for help to your safety buddy and report the incident to INESC MN supervisor or Administrative staff - file 5, pagina 5
* try to solve it by yourself and talk to no one

Select the correct answer(s). Safety instructions for the INESC MN cleanroom can be found in this document:\*

* INESC MN Lab Safety Plan
* Safety rules at INESC MN
* INESC MN dept handbook
* Rules for using the INESC MN Cleanroom - file 5

Select the correct answer(s). The documentation related to laboratorial/cleanroom safety procedures can be found:\*

* INESC MN website [WWW.INESC-MN.PT](http://www.inesc-mn.pt) > Links > Internal > Safety Training
* INESC MN website [WWW.INESC-MN.PT](http://www.inesc-mn.pt)> Research > Training
* Transfer / INESC MN Cleanroom Safety
* INESC MN website [WWW.INESC-MN.PT](http://www.inesc-mn.pt)> Facilities > Cleanroom Safety
* Transfer / INESC MN Work Protocols
* Transfer / INESC MN Cleanroom Rules
* Transfer / INESC MN Safety Training

Select the correct answer(s). Which of the following activities require a safety buddy after normal working hours? (multiple answers can be selected)\*

* filling an empty beaker with a fresh mixture of sulfuric acid and hydrogen peroxide
* depositing a metal layer in the electron beam deposition system -> Sim, porque a pessoa pode desmaiar (por exemplo, por falta de comida), etc
* any activity that involves holding an open bottle of a strong acid like nitric acid -> Afinal sim, pela mesma razão de cima basicamente
* pouring a chemical mixture into a waste container

You are working after normal working hours and agreed to be a safety buddy for another user working at the cleanroom. Your process is complete and you are ready to leave the cleanroom. Is it your responsibility to stay until the other user is done with the work requiring a safety buddy?\*

* True -- by agreeing to be a safety buddy, you are committing to stay - sounds obvious…
* False -- I can leave and the other user needs to find a new safety buddy

Select the correct answer(s). How to proceed if you have a major chemical spill ?\* File 5, pagina 8 (e 4)

* immediately call for assistance -> só este, tendo em conta “major”
* try to hide it from everyone
* evaluate if the chemical is acid, base, etc.
* handle chemicals according to the SDS (Safety Data Sheet I assume)
* ask to someone else to clean it

Mark the correct statement(s): when I am in the wetbench area in the gray area I need to:\* File 5, pagina 8

* leave the ultrasound bath ON at all times - Nao me faz muito sentido ser…
* use the shelves to store finished process run sheets - Não, Folhas são arquivadas noutros sítios quando acaba o processo; só se mete em shelves no final do dia se não tivermos acabado o procedimento
* make sure to use the correct designated chemical waste containers for each reagent
* inform the responsible person if any issues arise
* identify chemical solutions

Select the correct answer(s). The proper order when putting on the cleanroom gowning is\*

* blue shoes, hair net, hood, coverall, boots, gloves, eyewear - file 5, pagina 6
* hair net, hood, boots, eyewear, coverall, blue shoes, gloves
* boots, hood, coverall, gloves, eyewear, hair net, blue shoes
* blue shoes, coverall, boots, hood, badge, gloves, eyewear

Select the correct answer(s). The process runsheet should:\*

* follow the sample everywhere - file 5, pagina 4
* be written with unreadable writing
* be completed along with the process - Sim, tem muitas notas e comentários, a professora mostrou-nos algumas
* contain the names of the responsible(s) for the process - sounds obvious
* be stowed in the proper shelf at the end of the day - Sim, há shelves na sala limpa e na Grey Area tambem
* contain comments and observations - Sim, muitas
* be written in pencil - NAO, lápis deita muitas partículas
* be left anywhere
* always be stored in the plastic mica - yes

Mark the correct statement(s):\*

* The organic solvents can only be dispensed in the water drain outside the cleanroom. - NO, file 5, pagina 8
* The samples should be taken home at the end of each session - NO, obvious
* Each user must have its own paper logbook/runsheet inside the cleanroom - Sim; user=grupo no nosso caso
* One should avoid entering the cleanroom when sick. - File 5, pagina 3
* All samples have to be handled with tweezers. - Penso que nao, algumas hands
* I must open the cleanroom suit to reach my phone whenever it rings in the cleanroom.
* I need to inform my Mentor / Cleanroom Engineers / Security when accidents happen. So I need to know my security chain.
* Gloves must be worn at all times inside the cleanroom and outside in the wetbench.
* Chewing gum is allowed while working inside the cleanroom.
* If I need to go to the gray area (class 10000), I can do it while wearing the garment for clean room Class 10/100 - No, file 5, pagina 7

Select the correct answer(s). When working with chemicals, which of the following provide adequate eye protection? (multiple answers can be selected)\*

* safety glasses and face shield - Minnesota file, pagina 17
* safety glasses
* reading glasses
* contact lenses
* chemical splash goggles - file 5, pagina 8

Complete the sentence: In addition to wearing splash goggles, \_\_\_\_\_ can be used for added eye protection\*

* cleanroom gloves
* rubber boots
* face shield - Minnesota file, pagina 17
* chemical gloves
* respirator
* splash aprons

Select the correct answer(s). What is the best way to find out information regarding hazards for a specific chemical?\* File 5, pagina 4

* ask to INESC MN staff
* study the SDS (or MSDS) and discuss any doubts you may have with INESC MN personnel
* call the manufacturer
* do an internet search

Select the correct answer(s). Beakers filled with chemicals don't need to be labeled unless they will be left overnight\*

* True. I can leave my chemicals unidentified
* Only water doesn't need labeling
* False. Chemicals need to be labeled all the times - Minnesota file, pagina 9

Select the correct answer(s). After cleaning/processing samples in the wet bench, what are the steps to be taken to clean and stow the glassware?\* File 5, pagina 7

* If organic solvents are used (e.g. microstip) then clean with: 1. acetone 2. IPA 3. DI water, and 4. hang to dry
* If weak acids are used, clean with: 1. DI water and 2. hang to dry
* Handling strong acids requires special training
* Use glassware to store strong acids such as HF
* If organic solvents are used (e.g. microstip) then clean with: 1. DI water and 2. acetone

Select the correct answer(s). After finishing your chemical process / cleaning process, chemicals in glassware need to be disposed in\*

* they will not be disposed of. Instead they will stay abandoned on top of the wet bench benchtop
* wet bench drain
* designated chemical waste containers - file 5, pagina 8
* available empty bottles

Select the correct answer(s). First Aid Kits can be found at:\*

* Room 016A - Cleanroom
* Room 016 - Hall for the clean room and gray area
* Room 02 - Soft Lithography Lab
* Room 011 - BIO lab
* Room 023A - BIONEER Lab
* Room 025 - Characterization room
* Room 023B - Milling room
* Room 104 - Printer room
* Room 105 - Secretariat Room
* All the above - file 5, pagina 3

Briefly describe your process topic and goal.\*

Fabricate devices with TMR magnetic sensors, whose process flow includes: bottom electrode definition, pillar definition, top electrode definition, thermal annealing and dicing.

Upload the INESC MN plant filled by you\*

files smaller than 1MB, Filename: "TMN\_Date\_Name of group", ex: TMN\_2020-01-01\_Group2.pdf

TMN\_2023-05-01\_Group1

PERGUNTAS VÂNIA:

* O que é o transfer? Esquecemo-nos
* Só transportando uma garrafa aberta de ácidos fortes precisas de um buddy? Sim, podes desmaiar, fazer uma espargata e dás pontapés simultâneos em duas máquinas, as quais caem uma em cima da outra e explodem, pulverizando o utilizador e a sala
* Use the shelves to store finished process run sheets - Não, só enquanto não acabar o procedimento; quando acabar, arquiva-se noutra sala