(6 p) As we discussed in the course, the Hypervisor in charge of coordinating several VMs maintains a shadow page table, which needs to be synchronized accordingly to the changes made by each VM to their own page tables. To perform such synchronisation, the Hypervisor does not mark the pages used by the VMs to maintain their page tables as read-only, but instead relies on the page faults issued by each VM to update its own shadow page table. What are the pros and cons of such an approach?

(6 p) As we discussed in the course, the Hypervisor in charge of coordinating several VMs maintains a shadow page table, which needs to be synchronized accordingly to the changes made by each VM to their own page tables. To perform such synchronisation, the Hypervisor marks the pages used by the VMs to maintain their page tables as read-only, instead of relying on the page faults issued by each VM to update its own shadow page table. What are the pros and cons of such an approach?

(6 p) Do all guest-induced page faults need to be re-injected to the guest OS? Motivate your answer.