Paging:

① first finding offset of Page directory and Page Table

virtual address 0x80100000 ⟶ Physical address 0x00100000

we have 4 KB Pages.

So

PD offset is 0x00000200

and PT offset is 0x00000066

PD will cantain 0x00066

PT will cantain 0x00100

③ It may give Page fault error as modifying virtual address might have not get and it may give Page fault error to get it loaded to new address

⑤ Context Switching:
Ⅰ The stack that sched() executes on is kstack of callen process
Ⅱ The Stack that Scheduler() executes on is kstack of callen process
Ⅲ Yes it returns in to the Process that get chance to run after switch()
It will return to callee Process when it get Scheduled next time.
gcc invariants are that it pushes function parameters on the Stack and calls function expects return value of function on same Stack
➔ here in switch there is exchange of

Stack i.e the caller expects it to return in same stack as in which it is called but it returns in the stack of process it switches back to.

⟹ acdb, acdb

⟹ it happens because each switch() calls Scheduler() to decide which Process to switch to which again calls switch() to actually switch Process.