a) why virtual memory?

allow us to run more programs/applications in the system than the physical memory they system has

b) what is demand paging?

OS copies the disk page only when it is needed and the page is not in the memory

c) what is page fault?

Exception when a program access a memory page which is not mapped to virtual address space of the process

d) why different page replacement algorithm? due to different kernel architectures.

e) what is frames here?

Main memory is split into fixed sized segments.