Study Material

Q1) WHAT IS GNU/LINUX?

A) The operating system needs a lot of fundamental programs to communicate between user and computer so that computer can understand instruction like reading and writing a file to hard disk.

b) Kernel is an important part of operating system, it is like core of the os.

c) Linux is the kernel component.

d) Since os cannot work all alone on the basis of kernel (which is again a set of programme), it needs rest of component i.e. other programs as well to function properly.

e) This other programs at that time were mainly written for GNU project, SO we refer the Linux as GNU/LINUX which is nowadays referred only as Linux.

Q1) WHAT IS KERNEL?

1. Kernel is a **COMPUTER PROGRAMME** which helps in the interaction between software and hardware through either 1) Drivers bundled as a part of kernel or drivers installed later in the form of kernel module.
2. It plays a major role in the resource management.
3. It assigns the ram and storage to different applications according to their needs.
4. Each os have a kernel. Without kernel OS is not possible.
5. The kernel’s job is to talk to the hardware and software and utilize the resources as best as possible.
6. There are basically two types of kernel a)Micro Kernels

b) Monolithic kernels

Q1) WHAT IS MICRO KERNEL?

Ans: In microkernel what happens is that, Kernel only deals with critical activities such as \*CPU and memory usage…

\*All the other drivers which are for device … are taken out of the kernel…

\*So in this case if a device has a buggy driver, it will not cause whole kernel or system to carsh… It will only crash certain applications which are using that device… which has a buggy driver.

\*It is difficult to create microkernel… only minix use this.

Q1) WHAT IS MONOLITHIC KERNEL?

ANS: In monolithic kernel DEVICE DRIVERS are bundled with i.e. made a part of kernel.

\*so when a device is connected, its extension is loaded and joined onto the kernel.

\*monolithic kernels often create problem as the moment, when a buggy driver is downloaded it overrides the mechanism of default driver and this can cause cease to the function of kernel… which in turn will cease the function of computer.

\*as device drivers are attached with kernel… in case… a lot of devices are connected … kernel can go out of memory…. This can make system crash or very slow.