LDD MCQ

1. **The major number identifies the ____ associated with the device.**
   a) driver
   b) protocol
   c) port
   d) none of the mentioned

2. **The minor number range should be_____**
   a) 0 to 15
   b) 0 to 63
   c) 0 to 255
   d) none of the mentioned

3. **Which one of the following is not true?**
   a) dynamic allocation of major numbers is not possible
   b) major number cannot be shared among drivers
   c) dynamic allocation of major numbers is not possible & also major number cannot be shared among drivers
   d) none of the mentioned

4. **In linux kernel 2.4, we can have**
   a) 256 character drivers only
   b) 256 block drivers only
   c) 256 character drivers and 256 block drivers at the same time
   d) none of the mentioned

5. **we use a driver for N number of files, then we have to create ___ device files.**
   a) N
   b) 1
   c) N-1
   d) None of the mentioned

6. **If we use a driver for various device files, then**
   a) minor number will be different for every device file
   b) minor number will be same for every device file
   c) minor number can not be allocated for any device file
   d) none of the mentioned

7. **The connection between the device file and device driver is based on the**
   a) name of device file
   b) number of device file
   c) name & number of device file
   d) none of the mentioned

8. **In linux kernel 2.1, the minor numbers were used to**
   a) represent the sub-functionalities of the driver
   b) identify the driver
   c) represent the device files
   d) none of the mentioned

9. **The kernel identifies the driver with its**
   a) module
   b) major number
   c) device file
   d) none of the mentioned

10. **In linux, a device driver can work without the**
    a) major number
    b) minor number
    c) device file name
    d) none of the mentioned

11. **Sysfs was originally called**
    a) device driver filesystem
    b) kernel interface filesystem
    c) kernel filesystem
    d) none of the mentioned

12. **What is sysfs?**
    a) it is a virtual filesystem
    b) users use it to get the information about the running kernel
    c) it is used for exporting kernel objects.
    d) all of the mentioned

13. **Sysfs can be considered as the reflection of the**
    a) kernel's device model
    b) user's device model
    c) network's device model
    d) none of the mentioned

14. **The files of sysfs contains the information about**
    a) devices and drivers
    b) memory mapping
    c) ports
    d) none of the mentioned

15. **Which one of the following is not true?**
    a) any file of the sysfs can not be edited
    b) some files of the sysfs are writable for configuration of devices
    c) any file of the sysfs may not be edited
    d) none of the mentioned

16. **In linux sysfs is always mounted at**
    a) /sys
    b) /proc/sys
    c) /proc/mounts
    d) none of the mentioned

17. **Libsysfs is a**
    a) user space library
    b) kernel space library
    c) not a library
    d) none of the mentioned

18. **Sysfs represents the**
    a) kernel objects
    b) libraries
    c) api
    d) none of the mentioned

19. **Sysfs does not contains**
    a) regular files
    b) symbolic links
    c) directories
    d) none of the mentioned

20. **The directories in the /sys directory represents**
    a) the device files
    b) major subsystems that are registered with sysfs
    c) details of buses only
    d) none of the mentioned

21. **The directories of /sys directory**
    a) are created at system startup when the subsystems register themselves with kobject core
    b) are created when any device is connects with the system
    c) are created at the time of kernel compilation
    d) none of the mentioned

22. **The directory /sys/block contains**
    a) sub-directories for each block device
    b) symbolic link for each block device only
    c) device file for each block device only
    d) none of the mentioned

23. **In sysfs, each represented bus type has two directories named as**
    a) attributes and kobjects
    b) devices and drivers
    c) devices and kobjects
    d) none of the mentioned

24. **A device class describes the ____ type of device.**
    a) physical
    b) structural
    c) functional
    d) none of the mentioned

25. **Which one of the following directory contains every physical device that has been discovered by the bus types registered with the kernel?**
    a) /sys/devices
    b) /sys/bus/devices
    c) /devices
    d) none of the mentioned

26. **Which type of devices are peripheral devices?**
    a) platform devices
    b) system devices
    c) both system and platform devices
    d) none of the mentioned

27. **Which one of the following is not a system device?**
    a) CPU
    b) APIC
    c) Timer
    d) None of the mentioned

28. **Which one of the following is not a platform specific code?**
    a) x86 BIOS
    b) EFI on ia64
    c) both x86 BIOS and EFI on ia64
    d) none of the mentioned

29. In device driver model bus_type object contains the

a) name of the bus type
b) set of kobjects of the drivers
c) set of kobjects of the devices
d) all of the mentioned

30. The file fs/sysfs/sysfs.h contains the

a) internal header files for sysfs
b) function definitions will not shared locally among the sysfs source
c) all of the mentioned
d) none of the mentioned

31. Sysfs is initialised in _____ file via sysfs_init function.

a) fs/sysfs/mount.c
b) sysfs/mount.c
c) fs/mount.c
d) none of the mentioned

32. Kernel objects are exported as ____ via sysfs.

a) regular files
b) symbolic links
c) directories
d) none of the mentioned

33. Sysfs internally stores the pointer to the ___ that implements the directory in the file system.

a) kobjects
b) kstructures
c) kinodes
d) none of the mentioned

34. Attributes can be exported for objects in the form of _____ in the file system.

a) regular files
b) directories
c) symbolic links
d) none of the mentioned

35. In sysfs every subsystem has

a) a shared attribute structure
b) its own attribute structure
c) a shared & own attribute structure
d) none of the mentioned

36. **sysfs is based on**
    a) rootfs
    b) ramfs
    c) initramfs
    d) none of the mentioned

37. **Which one of the following is a notification to user space from the kernel that something has changed in the system's configuration?**
    a) hotplug event
    b) module event
    c) attach event
    d) none of the mentioned

38. **In the device driver model the device_driver object contains the**
    a) name of the device driver
    b) embedded kobjects
    c) method for probing a device
    d) all of the mentioned

39. **A ___ is a higher level view of a device that abstracts out low level implementation details/**
    a) inode
    b) class
    c) major number
    d) minor number

40. **When a device is removed from the system**
    a) files and directories of that device in the sysfs are removed automatically
    b) all the files of sysfs are preserved until the system turn offs
    c) it does not create any change in the sysfs
    d) none of the mentioned

41. **Relationship between components of device driver models are expressed in the sysfs as**
    a) a directory
    b) a regular file
    c) symbolic links between files and directories
    d) none of the mentioned

42. **What is the main role of the regular files in the sysfs?**
    a) regular files represent the attributes of devices and drivers
    b) regular files represent the kernel objects
    c) regular files represent the kernel sets
    d) none of the mentioned

43. The core data structure of device driver model is

a) kobject

b) kfile

c) kmodule

d) none of the mentioned

44. The kset contains

a) pointer to subsystem descriptor

b) pointer to the kobject type descriptor of the kset

c) head of the kobjects included in the kset

d) all of the mentioned

45. Which one of the following is a read-write semaphore in linux that protects all ksets and kobjects included in the filesystem?

a) rwsem

b) rwsemaphore

c) rws

d) none of the mentioned

46. Each device in the device driver model is represented by a _____ object.

a) driver

b) device

c) node

d) none of the mentioned

47. Each driver in the device driver model is described by a _____ object.

a) dev_d

b) device_d

c) dev_driver

d) device_driver

48. The channel between the processor and devices is called?

a) bus

b) driver

c) class

d) none of the mentioned

49. In which directory every kernel module of the system is represented?

a) /sys/kernel

b) /sys/module

c) /sys/kernel/module

d) none of the mentioned

50. In sysfs the device drivers of same _____ are expected to provide same functionalities to the user mode application.

a) class

b) kobjects

c) ksets

d) none of the mentioned

51.