

CS609 Current Subjective 2023

**Q.1: How many values can be passing to the nSTDhandle.
Write their names?**

Ans: **Three** types of values can be pass to the nSTDHandle

1. STD_INPUT_HANDLE
2. STD_OUPUT_HANDLE
3. STD_ERROR_HANDLE

Q.2: Pre-defined data types required for Windows APIs?

Ans:

- **BOOL** (for storing a single logical value)
- **HANDLE** (a handle for object)
- **LPTSTR** (a string pointer)
- **DWORD** (32-bit unsigned integer)

Q.3: Write the types of floating-point exception?

Ans: Five types of floating-point exception

1. Invalid operation
2. Division by zero
3. Overflow
4. Underflow
5. Inexact calculation.

Q.4: Write names of setting pointer?

Ans:

- SetFilePointer()
- SetFilePointerEx()

Q.5: Write the names of five predefined root keys?

Ans:

1. **HKEY_LOCAL_MACHINE** or HKLM
2. **HKEY_CURRENT_CONFIG** or HKCC
3. **HKEY_CLASSES_ROOT** or HKCR
4. **HKEY_CURRENT_USER** or HKCU
5. **HKEY_USERS** or HKU

Q.6: Write two root key management?

Ans:

- HKEY_CURRENT_USER
- HKEY_LOCAL_MACHINE

Q.7: Define the purpose of **dwShareMode and write three values of it?**

Ans: dwShareMode: This mode specifies how the file is shared?

- 0 signifies that file will not be shared
- FILE_SHARE_READ allows the file to be shared for concurrent read
- FILE_SHARE_WRITE allows the file to be shared for writing.

Q.8: Parameters of Windows Memory Management?

Ans: **VOID GetSystemInfo(LPSYSTEM_INFO lpSysInfo);**

Q.9: Which API used to create new heaps?

Ans: **HANDLE** HeapCreate(DWORD flOptions, SIZE_T dwInitialSize, SIZE_T dwMaximumSize);

Q.10: Write two other C language features that are useful?

Ans:

1. The conditional operator
2. The comma operator

Q.11: Write the difference between Errors and Exceptions?

Ans: important question for **5 marks**

Errors	Exception
Errors are usually raised by the environment in which the application is running.	Exceptions are caused by the code of the app the code belongs to.
It is not possible to recover from an error.	The use of try-catch blocks can handle exceptions and recover the system from exception.
Errors occur at run-time and are unknown by the compiler.	Exceptions may or may not be caught by the compiler.
Programmers include an explicit test to check for error, for example whether a file read/write operation has failed.	An exception could occur nearly anywhere, and it is practical to test for an exception.

Q.12: Some important Mcqs or short question:

Ans: **is m se mcqs ya pir short question aarhy han.**

OSError	Raised when system operation causes system related error.
OverflowError	Raised when the result of an arithmetic operation is too large to be represented.
ReferenceError	Raised when a weak reference proxy is used to access a garbage collected referent.
RuntimeError	Raised when an error does not fall under any other category.
SystemError	Raised when interpreter detects internal error.
SystemExit	Raised by sys.exit() function.

Q.13: Define the purpose of dwCtrlType identifies the signal and its values can be?

Ans: is m names zyda zruri han wo achy se yad krna:

1. **CTRL_C_EVENT**: Indicates that a Ctrl-C sequence was entered through keyboards.
2. **CTRL_CLOSE_EVENT**: Indicates that the console window is being closed.
3. **CTRL_BREAK_EVENT**: Indicates Ctrl-Break sequence.
4. **CTRL_LOGOFF_EVENT**: Indicates the user is trying to logoff.
5. **CTRL_SHUTDOWN_EVENT**: Indicates the user is trying to shut down.

Q.14: Write the name of three flags?

Ans: Three flags predefined in Windows

1. **HEAP_GENERATE_EXCEPTIONS**
2. **HEAP_NO_SERIALIZE**
3. **HEAP_CREATE_ENABLE_EXECUTE**

Q.15: important for short and mcqs:

Following are the three heaps as shown in the figure:

1. **ProcHeap** ✓
2. **RecHeap** ✓
3. **NodeHeap** ✓

ProcHeap contains the root address, but **RecHeap** stores the records. **NodeHeap** on the other hand stores the nodes when they are created. Sorting will be performed in the

Q.16: Modify any record randomly and get the total count of records in the file. Last time ye code aya tha record ko randomly modify krna code to kafi bara ha jitna yad krlo wohi best ha. Topic # 34

Ans:

```
#include "Everything.h"

#define STRING_SIZE 256

typedef struct _RECORD { /* File record structure */

    DWORD                referenceCount; /* 0 means an empty record */

    SYSTEMTIME            recordCreationTime;

    SYSTEMTIME            recordLastRefernceTime;

    SYSTEMTIME            recordUpdateTime;

    TCHAR                 dataString[STRING_SIZE];

} RECORD;

typedef struct _HEADER { /* File header descriptor */

    DWORD                numRecords;

    DWORD                numNonEmptyRecords;

} HEADER;
```

Q.17: How many standard IO devices used in Operating system.

Ans: There are **three** standard IO devices used in Operating system.

1. Input
2. Output
3. Error

Important Topic (11, 12 13, 14)