is needed. Undefined behavior occurs if a program tests floating-point status flags or runs under non-default control modes in a region for which the value of the pragma switch is OFF.

Typically, an FENV_ACCESS pragma that specifies the ON switch would be placed at the beginning of a function body:

```
void f(double x, double y)
{
   #pragma STDC FENV_ACCESS ON
   ...
}
```

The function f may test floating-point status flags or change control modes as needed. At the end of f's body, the pragma switch will return to its previous state.

When a program goes from an FENV_ACCESS "off" region to an "on" region during execution, the floating-point status flags have unspecified values and the control modes have their default settings.

Floating-Point Exception Functions

```
int feclearexcept(int excepts);
int fegetexceptflag(fexcept_t *flagp, int excepts);
int feraiseexcept(int excepts);
int fesetexceptflag(const fexcept_t *flagp,
                              int excepts);
int fetestexcept(int excepts);
```

The <fenv.h> functions are divided into three groups. Functions in the first group deal with the floating-point status flags. Each of the five functions has an int parameter named excepts, which is the bitwise *or* of one or more of the floating-point exception macros (the first group of macros listed in Table 27.8). For example, the argument passed to one of these functions might be FE_INVALID | FE_OVERFLOW | FE_UNDERFLOW, to represent the combination of these three status flags. The argument may also be zero, to indicate that no flags are selected.

feclearexcept   The feclearexcept function attempts to clear the floating-point exceptions represented by excepts. It returns zero if excepts is zero or if all specified exceptions were successfully cleared; otherwise, it returns a nonzero value.

fegetexceptflag   The fegetexceptflag function attempts to retrieve the states of the floating-point status flags represented by excepts. This data is stored in the fexcept_t object pointed to by flagp. The fegetexceptflag function returns zero if the states of the status flags were successfully stored; otherwise, it returns a nonzero value.

feraiseexcept   The feraiseexcept function attempts to raise supported floating-point exceptions represented by excepts. It is implementation-defined whether feraiseexcept also raises the *inexact* floating-point exception whenever it