:mod:`curses.ascii` --- Utilities for ASCII characters

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, **line 1**); *backlink*

Unknown interpreted text role "mod".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, **line 4**)

Unknown directive type "module".

```
.. module:: curses.ascii
   :synopsis: Constants and set-membership functions for ASCII characters.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, **line 7**)

Unknown directive type "moduleauthor".

```
.. moduleauthor:: Eric S. Raymond <esr@thyrsus.com>
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, **line 8**)

Unknown directive type "sectionauthor".

```
.. sectionauthor:: Eric S. Raymond <esr@thyrsus.com>
```

The :mod:`curses.ascii` module supplies name constants for ASCII characters and functions to test membership in various ASCII character classes. The constants supplied are names for control characters as follows:

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, **line 12**); *backlink*

Unknown interpreted text role "mod".

Name	Meaning
:const:`NUL`	
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, **line 20**); *backlink* Unknown interpreted text role "const".	

Name	Meaning
:const:`SOH` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 22);` *backlink* Unknown interpreted text role "const".	Start of heading, console interrupt
:const:`STX` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 24);` *backlink* Unknown interpreted text role "const".	Start of text
:const:`ETX` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 26);` *backlink* Unknown interpreted text role "const".	End of text
:const:`EOT` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 28);` *backlink* Unknown interpreted text role "const".	End of transmission

Name	Meaning
:const:`ENQ` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst,` line 30); *backlink*** Unknown interpreted text role "const".	Enquiry, goes with :const:`ACK` flow control **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst,` line 30); *backlink*** Unknown interpreted text role "const".
:const:`ACK` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst,` line 32); *backlink*** Unknown interpreted text role "const".	Acknowledgement
:const:`BEL` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst,` line 34); *backlink*** Unknown interpreted text role "const".	Bell
:const:`BS` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst,` line 36); *backlink*** Unknown interpreted text role "const".	Backspace

Name	Meaning
:const:`TAB` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 38`); *backlink* Unknown interpreted text role "const".	Tab
:const:`HT` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 40`); *backlink* Unknown interpreted text role "const".	Alias for :const:`TAB`: "Horizontal tab" **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 40`); *backlink* Unknown interpreted text role "const".
:const:`LF` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 42`); *backlink* Unknown interpreted text role "const".	Line feed
:const:`NL` **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 44`); *backlink* Unknown interpreted text role "const".	Alias for :const:`LF`: "New line" **System Message: ERROR/3** (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 44`); *backlink* Unknown interpreted text role "const".

Name	Meaning
:const:`VT`	Vertical tab
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 46`); *backlink* Unknown interpreted text role "const".	
:const:`FF`	Form feed
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 48`); *backlink* Unknown interpreted text role "const".	
:const:`CR`	Carriage return
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 50`); *backlink* Unknown interpreted text role "const".	
:const:`SO`	Shift-out, begin alternate character set
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 52`); *backlink* Unknown interpreted text role "const".	

Name	Meaning
:const:`SI` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 54`); *backlink*** Unknown interpreted text role "const".	Shift-in, resume default character set
:const:`DLE` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 56`); *backlink*** Unknown interpreted text role "const".	Data-link escape
:const:`DC1` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 58`); *backlink*** Unknown interpreted text role "const".	XON, for flow control
:const:`DC2` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 60`); *backlink*** Unknown interpreted text role "const".	Device control 2, block-mode flow control

Name	Meaning
:const:`DC3` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 62`); *backlink*** Unknown interpreted text role "const".	XOFF, for flow control
:const:`DC4` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 64`); *backlink*** Unknown interpreted text role "const".	Device control 4
:const:`NAK` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 66`); *backlink*** Unknown interpreted text role "const".	Negative acknowledgement
:const:`SYN` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 68`); *backlink*** Unknown interpreted text role "const".	Synchronous idle

Name	Meaning
:const:`ETB` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ [cpython-main][Doc] [library]curses.ascii.rst,` line 70);** *backlink* Unknown interpreted text role "const".	End transmission block
:const:`CAN` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ [cpython-main][Doc] [library]curses.ascii.rst,` line 72);** *backlink* Unknown interpreted text role "const".	Cancel
:const:`EM` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ [cpython-main][Doc] [library]curses.ascii.rst,` line 74);** *backlink* Unknown interpreted text role "const".	End of medium
:const:`SUB` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ [cpython-main][Doc] [library]curses.ascii.rst,` line 76);** *backlink* Unknown interpreted text role "const".	Substitute

Name	Meaning
:const:`ESC` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 78`); *backlink*** Unknown interpreted text role "const".	Escape
:const:`FS` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 80`); *backlink*** Unknown interpreted text role "const".	File separator
:const:`GS` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 82`); *backlink*** Unknown interpreted text role "const".	Group separator
:const:`RS` **System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 84`); *backlink*** Unknown interpreted text role "const".	Record separator, block-mode terminator

Name	Meaning
:const:`US`	Unit separator
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 86); *backlink*` Unknown interpreted text role "const".	
:const:`SP`	Space
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 88); *backlink*` Unknown interpreted text role "const".	
:const:`DEL`	Delete
System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 90); *backlink*` Unknown interpreted text role "const".	

Note that many of these have little practical significance in modern usage. The mnemonics derive from teleprinter conventions that predate digital computers.

The module supplies the following functions, patterned on those in the standard C library:

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 99`)

Unknown directive type "function".

```
.. function:: isalnum(c)

   Checks for an ASCII alphanumeric character; it is equivalent to ``isalpha(c) or
   isdigit(c)``.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst, line 105`)

Unknown directive type "function".

```
.. function:: isalpha(c)

    Checks for an ASCII alphabetic character; it is equivalent to ``isupper(c) or
    islower(c)``.
```

```
.. function:: isascii(c)

    Checks for a character value that fits in the 7-bit ASCII set.
```

```
.. function:: isblank(c)

    Checks for an ASCII whitespace character; space or horizontal tab.
```

```
.. function:: iscntrl(c)

    Checks for an ASCII control character (in the range 0x00 to 0x1f or 0x7f).
```

```
.. function:: isdigit(c)

    Checks for an ASCII decimal digit, ``'0'`` through ``'9'``.  This is equivalent
    to ``c in string.digits``.
```

```
.. function:: isgraph(c)

    Checks for ASCII any printable character except space.
```

```
.. function:: islower(c)

    Checks for an ASCII lower-case character.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, line 142)

Unknown directive type "function".

```
.. function:: isprint(c)

   Checks for any ASCII printable character including space.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, line 147)

Unknown directive type "function".

```
.. function:: ispunct(c)

   Checks for any printable ASCII character which is not a space or an alphanumeric
   character.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, line 153)

Unknown directive type "function".

```
.. function:: isspace(c)

   Checks for ASCII white-space characters; space, line feed, carriage return, form
   feed, horizontal tab, vertical tab.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, line 159)

Unknown directive type "function".

```
.. function:: isupper(c)

   Checks for an ASCII uppercase letter.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, line 164)

Unknown directive type "function".

```
.. function:: isxdigit(c)

   Checks for an ASCII hexadecimal digit.  This is equivalent to ``c in
   string.hexdigits``.
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, line 170)

Unknown directive type "function".

```
.. function:: isctrl(c)

   Checks for an ASCII control character (ordinal values 0 to 31).
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main][Doc][library]curses.ascii.rst`, line 175)

Unknown directive type "function".

```
.. function:: ismeta(c)
```

```
       Checks for a non-ASCII character (ordinal values 0x80 and above).
```

These functions accept either integers or single-character strings; when the argument is a string, it is first converted using the built-in function :func:`ord`.

Note that all these functions check ordinal bit values derived from the character of the string you pass in; they do not actually know anything about the host machine's character encoding.

The following two functions take either a single-character string or integer byte value; they return a value of the same type.

```
.. function:: ascii(c)

   Return the ASCII value corresponding to the low 7 bits of *c*.
```

```
.. function:: ctrl(c)

   Return the control character corresponding to the given character (the character
   bit value is bitwise-anded with 0x1f).
```

```
.. function:: alt(c)

   Return the 8-bit character corresponding to the given ASCII character (the
   character bit value is bitwise-ored with 0x80).
```

The following function takes either a single-character string or integer value; it returns a string.

```
.. index::
   single: ^ (caret); in curses module
   single: ! (exclamation); in curses module
```

```
.. function:: unctrl(c)

   Return a string representation of the ASCII character *c*.  If *c* is printable,
   this string is the character itself.  If the character is a control character
   (0x00--0x1f) the string consists of a caret (``'^'``) followed by the
   corresponding uppercase letter. If the character is an ASCII delete (0x7f) the
```

string is ``'^?'``. If the character has its meta bit (0x80) set, the meta bit
is stripped, the preceding rules applied, and ``'!'`` prepended to the result.

```
.. data:: controlnames

   A 33-element string array that contains the ASCII mnemonics for the thirty-two
   ASCII control characters from 0 (NUL) to 0x1f (US), in order, plus the mnemonic
   ``SP`` for the space character.
```