

Free ASN.1:2008 compliance suite

Test case descriptions

Test case number	ASN.1 type tested	Test case description	Expected test case results
1	Common blocks	Too big tag number	Decoder must show tag number in hexadecimal format
2	Common blocks	Never-ending tag number (non-finished encoding of tag number)	Decoder must show an error
3	Common blocks	Absence of standard length block	Decoder must show an error
4	Common blocks	0xFF value as standard length block	Decoder must show an error
5	Common blocks	Unnecessary usage of long length form (length value is less than 127, but long form of length encoding is used)	Decoder must show a warning message
6	REAL	Encoding of "+0" REAL value with more than 0 octets in value block	REAL value +0 must be encoded with zero-length value block. Decoder must show an error
7	REAL	Encoding of "-0" REAL value in common way (not as a "special value")	REAL value -0 must be encoded as a special value. Decoder must show an error.
8	REAL	Encoding "special value", but value block has length more than 1	Decoder must show a warning.
9	REAL	Bits 6 and 5 of information octet for REAL are equal to 11 ₂	Decoder must show an error.
10	REAL	Needlessly long encoding of exponent block for REAL type	Decoder must show a warning.
11	REAL	Incorrect NR form	Decoder must show an error.
12	REAL	Encoding of "special value" not from ASN.1 standard	Decoder must show an error.
13	REAL	Absence of mantissa block	Decoder must show an error.
14	REAL	Absence of exponent and mantissa block	Decoder must show an error.
15	REAL	Too big value of exponent	Decoder must show value of exponent in hexadecimal format.
16	REAL	Too big value of mantissa	Decoder must show value of mantissa in

			hexadecimal format.
17	REAL	Too big values for exponent and mantissa + using of "scaling factor" value	Decoder must show values for exponent and mantissa in hexadecimal format + show scaling factor value.
18	INTEGER	Needlessly long encoding for INTEGER value	Decoder must show a warning.
19	INTEGER	Never-ending encoding for INTEGER type (non-finished encoding)	Decoder must show an error.
20	INTEGER	Too big INTEGER number encoded	Decoder must show INTEGER value in hexadecimal format.
21	OBJECT IDENTIFIER	Needlessly long format of SID encoding	Decoder must show a warning.
22	OBJECT IDENTIFIER	Too big value for SID	Decoder must show value for particular SID in hexadecimal format.
23	OBJECT IDENTIFIER	Unfinished encoding of SID	Decoder must show an error.
24	OBJECT IDENTIFIER	Common encoding of OID	No warnings and errors.
25	BOOLEAN	Length of value block is more than 1 + encoding of FALSE value	Decoder must show a warning.
26	BOOLEAN	Length of value block is more than 1 + encoding of TRUE value	Decoder must show a warning.
27	BOOLEAN	Absence of value block	Decoder must show an error.
28	BOOLEAN	Right encoding for TRUE value	No warnings and errors.
29	BOOLEAN	Right encoding for FALSE value	No warnings and errors.
30	NULL	Using of value block with length more than 0 octet	Decoder must show a warning.
31	NULL	Unfinished encoding of value block (+ using of value block with length more than 0 octet)	Decoder must show an error.
32	NULL	Right NULL encoding	No warnings and errors.
33	BIT STRING	Too big value for "unused bits"	Decoder must show an error.
34	BIT STRING	Unfinished encoding for value block	Decoder must show an error.
35	BIT STRING	Using of different from BIT STRING types as internal types for constructive encoding	Decoder must show an error.
36	BIT STRING	Using of "unused bits" in internal BIT STRINGs with constructive form of encoding	Decoder must show an error.
37	BIT STRING	Using of definite form of	No warnings and errors.

		length block in case of constructive form of encoding	
38	BIT STRING	Using of indefinite form of length block in case of constructive form of encoding	No warnings and errors.
39	BIT STRING	Using of constructive form of encoding for empty BIT STRING	No warnings and errors.
40	BIT STRING	Encoding of empty BIT STRING (no value block encoded)	No warnings and errors.
41	OCTET STRING	Using of different from OCTET STRING types as internal types for constructive encoding	Decoder must show an error.
42	OCTET STRING	Unfinished encoding for value block in case of constructive form of encoding	Decoder must show an error.
43	OCTET STRING	Unfinished encoding for value block in case of primitive form of encoding	Decoder must show an error.
44	OCTET STRING	Encoding of empty OCTET STRING (no value block encoded)	No warnings and errors.
45	OCTET STRING	Using of constructive form of encoding for empty OCTET STRING	No warnings and errors.
46	BIT STRING	Using of indefinite length in case of primitive form of encoding	Decoder must show an error.
47	BIT STRING	Using of definite form of length encoding, but use EOC as one of internal string	Decoder must show an error (EOC is unexpected, BIT STRINGS may consists of BIT STRINGS only).
48	BIT STRING	Using of more than 7 "unused bits" in BIT STRING with constrictive encoding form	Decoder must show an error.