

# ISO/IEC 8825-5:2021-06 (E)

## Information technology - ASN.1 encoding rules - Part 5: Mapping W3C XML schema definitions into ASN.1

---

<b>Contents</b>		<b>Page</b>
1	Scope .....	1
2	Normative references.....	1
2.1	Identical Recommendations   International Standards .....	1
2.2	Additional references .....	2
3	Definitions.....	2
3.1	Imported definitions.....	2
3.2	Additional definitions.....	3
4	Abbreviations .....	3
5	Notation.....	3
6	Purpose and extent of standardization .....	3
7	Mapping XSD Schemas .....	4
8	Ignored schema components and properties.....	5
9	ASN.1 modules .....	6
10	Name conversion.....	6
10.1	General.....	6
10.2	Generating ASN.1 type definitions that are references to ASN.1 type assignments.....	7
10.3	Generating identifiers and type reference names .....	7
10.4	Order of the mapping .....	9
11	Mapping uses of XSD built-in types .....	10
12	Mapping facets.....	10
12.1	The length, minLength, and maxLength facets .....	11
12.2	The pattern facet.....	11
12.3	The whiteSpace facet.....	11
12.4	The enumeration facet .....	12
12.5	Other facets.....	14
13	Mapping simple type definitions.....	14
14	Mapping element declarations .....	16
15	Mapping attribute declarations.....	17
16	Mapping values of simple type definitions .....	17
17	Mapping model group definitions.....	17
18	Mapping model groups .....	17
19	Mapping particles .....	18
20	Mapping complex type definitions.....	19
21	Mapping wildcards.....	20
22	Mapping attribute uses.....	22
23	Mapping uses of simple and complex type definitions (general case).....	22
24	Mapping special uses of simple and complex type definitions (substitutable).....	23
25	Mapping special uses of simple and complex type definitions (substitutable, nillable).....	24
26	Mapping special uses of simple type definitions (nillable).....	25
27	Mapping special uses of complex type definitions (nillable).....	26

28	Mapping special uses of <b>element declarations</b> (head of element substitution group) .....	27
29	Generating special ASN.1 type assignments for types used in <b>element declarations</b> .....	27
30	Generating special ASN.1 type assignments for types belonging to a derivation hierarchy .....	29
31	Generating special ASN.1 type assignments for element substitution groups.....	29
	Annex A – ASN.1 type definitions corresponding to XSD built-in types for the version 1 mapping .....	30
	Annex B – ASN.1 type definitions corresponding to XSD built-in types for the version 2 mapping .....	33
	Annex C – Identification of the XSD module.....	37
	Annex D – Examples of mappings .....	38
	D.1 A Schema using <b>simple type definitions</b> .....	38
	D.2 The corresponding ASN.1 definitions.....	39
	D.3 Further examples.....	40
	Annex E – Use of the mapping to provide binary encodings for W3C XML Schema .....	60
	E.1 Encoding XSD Schemas .....	60
	E.2 Transfer without using the XSD Schema for Schemas .....	60
	E.3 Transfer using the XSD Schema for Schemas .....	60