

Encoding Vedic Accents (draft by Michael Everson, 2000-04-22)

There are several issues. One presumes that the ISCII 1991 Vedic characters were not encoded because these issues were considered too complex to address at the time. ISCII 1991 encodes 31 Vedic symbols. Four of these are encoded in UCS (xB2 ऀ SHORT KAMPA, xB3 ॑ LONG KAMPA, xB6 ॒ SVARITA, xB8 ॒ ANUDATTA). One can be represented by a sequence of characters: (xB7 ॒ KAMPA is U+0951 + U+0952.

The remaining characters fall into two classes: combining characters and variants of visarga and anusvara. The table attached shows all of them. However, it is proposed that the new VARIANT SELECTOR proposed for mathematics be extended to represent these and other variants in Devanagari (the Bombay forms shown in Unicode 3.0 are taken as basic). The numbers given here refer to the table below, not the real UCS. This table is not yet exhaustive with regard to the Vedic characters, but is indicative. Question: is this the way to go?

0902 ँ ANUSVARA	+	0520 VARIANT SELECTOR ONE	=	0503 ॠ YAJURVEDIC ANUSVARA ONE
0902 ँ ANUSVARA	+	0521 VARIANT SELECTOR TWO	=	0504 ॡ YAJURVEDIC ANUSVARA TWO
0902 ँ ANUSVARA	+	0522 VARIANT SELECTOR THREE	=	0505 ॢ SHUKLA YAJURVEDIC ANUSVARA
0902 ँ ANUSVARA	+	0523 VARIANT SELECTOR FOUR	=	0506 ॣ YAJURVEDIC ANUSVARA THREE
0902 ँ ANUSVARA	+	0524 VARIANT SELECTOR FIVE	=	0507 । YAJURVEDIC ANUSVARA FOUR
0902 ँ ANUSVARA	+	0525 VARIANT SELECTOR SIX	=	050D ॥ KRISHNA YAJURVEDIC ANUSVARA
0902 ँ ANUSVARA	+	0526 VARIANT SELECTOR SEVEN	=	050E ॥ KRISHNA YAJURVEDIC LONG ANUSVARA
0902 ँ ANUSVARA	+	0527 VARIANT SELECTOR EIGHT	=	050F ॥ YAJURVEDIC ANUSVARA FIVE
0902 ँ ANUSVARA	+	0528 VARIANT SELECTOR NINE	=	0510 ॥ YAJURVEDIC ANUSVARA SIX
0902 ँ ANUSVARA	+	0529 VARIANT SELECTOR TEN	=	0511 ॥ YAJURVEDIC ANUSVARA SEVEN
0902 ँ ANUSVARA	+	052A VARIANT SELECTOR ELEVEN	=	0518 ॠ ANSHUMANS VEDIC ANUSVARA
0903 ः VISARGA	+	0520 VARIANT SELECTOR ONE	=	0500 ृ VISARGA SIX
0903 ः VISARGA	+	0521 VARIANT SELECTOR TWO	=	0501 ॄ VISARGA ONE
0903 ः VISARGA	+	0522 VARIANT SELECTOR THREE	=	0508 ॅ VISARGA TWO
0903 ः VISARGA	+	0523 VARIANT SELECTOR FOUR	=	0509 ॆ VISARGA THREE
0903 ः VISARGA	+	0524 VARIANT SELECTOR FIVE	=	050A े VISARGA FOUR
0903 ः VISARGA	+	0525 VARIANT SELECTOR SIX	=	050B ै VISARGA FIVE
0905 अ A	+	0520 VARIANT SELECTOR ONE	=	अ VARIANT A
0906 आ AA	+	0520 VARIANT SELECTOR ONE	=	आ VARIANT AA
090B ऋ VOCALIC R	+	0520 VARIANT SELECTOR ONE	=	ॠ VARIANT VOCALIC R
0960 ॠ VOCALIC RR	+	0520 VARIANT SELECTOR ONE	=	ॡ VARIANT VOCALIC RR
090C ॡ VOCALIC L	+	0520 VARIANT SELECTOR ONE	=	ॢ VARIANT VOCALIC L
0961 ॢ VOCALIC LL	+	0520 VARIANT SELECTOR ONE	=	ॣ VARIANT VOCALIC LL
0911 ओ CANDRA O	+	0520 VARIANT SELECTOR ONE	=	ओ VARIANT CANDRA O
0912 औ SHORT O	+	0520 VARIANT SELECTOR ONE	=	ओ VARIANT SHORT O
0913 ओ O	+	0520 VARIANT SELECTOR ONE	=	ओ VARIANT O
0914 औ AU	+	0520 VARIANT SELECTOR ONE	=	ओ VARIANT AU
091D झ JHA	+	0520 VARIANT SELECTOR ONE	=	झ VARIANT JHA
091D झ JHA	+	0521 VARIANT SELECTOR TWO	=	ॡ NEPALI JHA
0923 ण NNA	+	0520 VARIANT SELECTOR ONE	=	ण VARIANT NNA
0915+0937 क्ष KSSA	+	0520 VARIANT SELECTOR ONE	=	क्ष VARIANT KSSA
0967 १ ONE	+	0520 VARIANT SELECTOR ONE	=	१ VARIANT ONE
096A ४ FOUR	+	0520 VARIANT SELECTOR ONE	=	४ VARIANT FOUR
096B ५ FIVE	+	0520 VARIANT SELECTOR ONE	=	५ VARIANT FIVE
096E ८ EIGHT	+	0520 VARIANT SELECTOR ONE	=	८ VARIANT EIGHT
096F ९ NINE	+	0520 VARIANT SELECTOR ONE	=	९ VARIANT NINE
096F ९ NINE	+	0521 VARIANT SELECTOR TWO	=	९ VARIANT NINE

VEDIC ACCENTS

	050	051	052	090	091	092	093	094	095	096	097
0	◌ं	◌ं॑	VARIANT SELECTOR ONE		ऐ	ठ	र	ी	ॐ	ऋ	०
1	◌ः	◌ः॑	VARIANT SELECTOR TWO	ँ	ऑ	ड	ॠ	ु	ं	ॡ	१
2	ॢ	ॣ	VARIANT SELECTOR THREE	ं	ओ	ढ	ल	ू	्र	ृ	२
3	◌ं॒	॥	VARIANT SELECTOR FOUR	ः	ओ	ण	ळ	ृ	े	॥	३
4	◌ं॒	॥	VARIANT SELECTOR FIVE		औ	त	ळ	ृ	े	।	२३
5	◌ं॒	॥	VARIANT SELECTOR SIX	अ	क	थ	व	ँ	ं	॥	२४
6	◌ं॒	॥	VARIANT SELECTOR SEVEN	आ	ख	द	श	ँ	ं	०	३५
7	◌ं॒	॥	VARIANT SELECTOR EIGHT	इ	ग	ध	ष	े	्र	१	३
8	◌ं॒	॥	VARIANT SELECTOR NINE	ई	घ	न	स	ै	क	२	
9	◌ं॒		VARIANT SELECTOR TEN	उ	ङ	न	ह	ॉ	ख	३	
A	◌ं॒		VARIANT SELECTOR ELEVEN	ऊ	च	प	्र	ो	ग	४	
B	◌ं॒		VARIANT SELECTOR TWELVE	ऋ	छ	फ	्र	ो	ज	५	॥
C	ॣ		VARIANT SELECTOR THIRTEEN	ॡ	ज	ब	्र	ौ	ड	६	॥
D	ॣ		VARIANT SELECTOR FOURTEEN	ँ	झ	भ	॥	्र	ढ	७	॥
E	ॣ		VARIANT SELECTOR FIFTEEN	ँ	ञ	म	ा		फ	८	॥
F	ॣ		VARIANT SELECTOR SIXTEEN	ए	ट	य	ि		य	९	॥

G =
P =

VEDIC ACCENTS

dec	hex	Name
	00	(This position shall not be used)
	01	DEVANAGARI SIGN VISARGA ONE
	02	DEVANAGARI SIGN PUSHPIKA
	03	DEVANAGARI SIGN YAJURVEDIC ANUSVARA ONE
	04	DEVANAGARI SIGN YAJURVEDIC ANUSVARA TWO
	05	DEVANAGARI SIGN SHUKLA YAJURVEDIC ANUSVARA
	06	DEVANAGARI SIGN YAJURVEDIC ANUSVARA THREE
	07	DEVANAGARI SIGN YAJURVEDIC ANUSVARA FOUR
	08	DEVANAGARI SIGN VISARGA TWO
	09	DEVANAGARI SIGN VISARGA THREE
	0A	DEVANAGARI SIGN VISARGA FOUR
	0B	DEVANAGARI SIGN VISARGA FIVE
	0C	DEVANAGARI SIGN JIHVAMULIYA ONE
	0D	DEVANAGARI SIGN KRISHNA YAJURVEDIC ANUSVARA
	0E	DEVANAGARI SIGN KRISHNA YAJURVEDIC LONG ANUSVARA
	0F	DEVANAGARI SIGN YAJURVEDIC ANUSVARA FIVE
	10	DEVANAGARI SIGN YAJURVEDIC ANUSVARA SIX
	11	DEVANAGARI SIGN YAJURVEDIC ANUSVARA SEVEN
	12	DEVANAGARI SIGN JIHVAMULIYA TWO
	13	DEVANAGARI SIGN UPADHMANIYA ONE
	14	DEVANAGARI SIGN JIHVAMULIYA THREE
	15	DEVANAGARI SIGN UPADHMANIYA TWO
	16	DEVANAGARI SIGN UPADHMANIYA THREE
	17	DEVANAGARI SIGN ARDHAVISARGA
	18	DEVANAGARI SIGN ANSHUMANS VEDIC ANUSVARA
	19	(This position shall not be used)
	1A	(This position shall not be used)
	1B	(This position shall not be used)
	1C	(This position shall not be used)
	1D	(This position shall not be used)
	1E	(This position shall not be used)
	1F	(This position shall not be used)
	20	VARIANT SELECTOR ONE
	21	VARIANT SELECTOR TWO
	22	VARIANT SELECTOR THREE
	23	VARIANT SELECTOR FOUR
	24	VARIANT SELECTOR FIVE
	25	VARIANT SELECTOR SIX
	26	VARIANT SELECTOR SEVEN
	27	VARIANT SELECTOR EIGHT
	28	VARIANT SELECTOR NINE
	29	VARIANT SELECTOR TEN
	2A	VARIANT SELECTOR ELEVEN
	2B	VARIANT SELECTOR TWELVE
	2C	VARIANT SELECTOR THIRTEEN
	2D	VARIANT SELECTOR FOURTEEN
	2E	VARIANT SELECTOR FIFTEEN
	2F	VARIANT SELECTOR SIXTEEN
	00	(This position shall not be used)
	01	DEVANAGARI SIGN CANDRABINDU
	02	DEVANAGARI SIGN ANUSVARA
	03	DEVANAGARI SIGN VISARGA
	04	(This position shall not be used)
	05	DEVANAGARI LETTER A
	06	DEVANAGARI LETTER AA
	07	DEVANAGARI LETTER I
	08	DEVANAGARI LETTER II
	09	DEVANAGARI LETTER U
	0A	DEVANAGARI LETTER UU
	0B	DEVANAGARI LETTER VOCALIC R
	0C	DEVANAGARI LETTER VOCALIC L
	0D	DEVANAGARI LETTER CANDRA E
	0E	DEVANAGARI LETTER SHORT E
	0F	DEVANAGARI LETTER E
	10	DEVANAGARI LETTER AI
	11	DEVANAGARI LETTER CANDRA O
	12	DEVANAGARI LETTER SHORT O
	13	DEVANAGARI LETTER O
	14	DEVANAGARI LETTER AU
	15	DEVANAGARI LETTER KA
	16	DEVANAGARI LETTER KHA
	17	DEVANAGARI LETTER GA
	18	DEVANAGARI LETTER GHA
	19	DEVANAGARI LETTER NGA
	1A	DEVANAGARI LETTER CA
	1B	DEVANAGARI LETTER CHA
	1C	DEVANAGARI LETTER JA
	1D	DEVANAGARI LETTER JHA
	1E	DEVANAGARI LETTER NYA
	1F	DEVANAGARI LETTER TTA
	20	DEVANAGARI LETTER TTHA
	21	DEVANAGARI LETTER DDA
	22	DEVANAGARI LETTER DDHA
	23	DEVANAGARI LETTER NNA
	24	DEVANAGARI LETTER TA
	25	DEVANAGARI LETTER THA
	26	DEVANAGARI LETTER DA
	27	DEVANAGARI LETTER DHA

Group 00

dec	hex	Name
	28	DEVANAGARI LETTER NA
	29	DEVANAGARI LETTER NNNA
	2A	DEVANAGARI LETTER PA
	2B	DEVANAGARI LETTER PHA
	2C	DEVANAGARI LETTER BA
	2D	DEVANAGARI LETTER BHA
	2E	DEVANAGARI LETTER MA
	2F	DEVANAGARI LETTER YA
	30	DEVANAGARI LETTER RA
	31	DEVANAGARI LETTER RRA
	32	DEVANAGARI LETTER LA
	33	DEVANAGARI LETTER LLA
	34	DEVANAGARI LETTER LLLA
	35	DEVANAGARI LETTER VA
	36	DEVANAGARI LETTER SHA
	37	DEVANAGARI LETTER SSA
	38	DEVANAGARI LETTER SA
	39	DEVANAGARI LETTER HA
	3A	DEVANAGARI STRESS SIGN FINAL UDATTA
	3B	DEVANAGARI STRESS SIGN ATHARVAVEDIC SVARITA
	3C	DEVANAGARI SIGN NUKTA
	3D	DEVANAGARI SIGN AVAGRAHA
	3E	DEVANAGARI VOWEL SIGN AA
	3F	DEVANAGARI VOWEL SIGN I
	40	DEVANAGARI VOWEL SIGN II
	41	DEVANAGARI VOWEL SIGN U
	42	DEVANAGARI VOWEL SIGN UU
	43	DEVANAGARI VOWEL SIGN VOCALIC R
	44	DEVANAGARI VOWEL SIGN VOCALIC RR
	45	DEVANAGARI VOWEL SIGN CANDRA E
	46	DEVANAGARI VOWEL SIGN SHORT E
	47	DEVANAGARI VOWEL SIGN E
	48	DEVANAGARI VOWEL SIGN AI
	49	DEVANAGARI VOWEL SIGN CANDRA O
	4A	DEVANAGARI VOWEL SIGN SHORT O
	4B	DEVANAGARI VOWEL SIGN O
	4C	DEVANAGARI VOWEL SIGN AU
	4D	DEVANAGARI SIGN VIRAMA
	4E	(This position shall not be used)
	4F	(This position shall not be used)
	50	DEVANAGARI OM
	51	DEVANAGARI STRESS SIGN UDATTA
	52	DEVANAGARI STRESS SIGN ANUDATTA
	53	DEVANAGARI GRAVE ACCENT
	54	DEVANAGARI ACUTE ACCENT
	55	DEVANAGARI STRESS SIGN LONG SVARITA
	56	DEVANAGARI STRESS SIGN MAITRAYANI SVARITA THREE
	57	DEVANAGARI STRESS SIGN KATHAKA ANUDATTA
	58	DEVANAGARI LETTER QA
	59	DEVANAGARI LETTER KHHA
	5A	DEVANAGARI LETTER GHHA
	5B	DEVANAGARI LETTER ZA
	5C	DEVANAGARI LETTER DDHA
	5D	DEVANAGARI LETTER RHA
	5E	DEVANAGARI LETTER FA
	5F	DEVANAGARI LETTER YYA
	60	DEVANAGARI LETTER VOCALIC RR
	61	DEVANAGARI LETTER VOCALIC LL
	62	DEVANAGARI VOWEL SIGN VOCALIC L
	63	DEVANAGARI VOWEL SIGN VOCALIC LL
	64	DEVANAGARI DANDA
	65	DEVANAGARI DOUBLE DANDA
	66	DEVANAGARI DIGIT ZERO
	67	DEVANAGARI DIGIT ONE
	68	DEVANAGARI DIGIT TWO
	69	DEVANAGARI DIGIT THREE
	6A	DEVANAGARI DIGIT FOUR
	6B	DEVANAGARI DIGIT FIVE
	6C	DEVANAGARI DIGIT SIX
	6D	DEVANAGARI DIGIT SEVEN
	6E	DEVANAGARI DIGIT EIGHT
	6F	DEVANAGARI DIGIT NINE
	70	DEVANAGARI ABBREVIATION SIGN
	71	DEVANAGARI STRESS SIGN SAMAVEDIC UDATTA
	72	DEVANAGARI STRESS SIGN SAMAVEDIC SVARITA
	73	DEVANAGARI STRESS SIGN SAMAVEDIC ANUDATTA
	74	DEVANAGARI STRESS SIGN SAMAVEDIC SVARITA U
	75	DEVANAGARI STRESS SIGN SAMAVEDIC SVARITA RA
	76	DEVANAGARI STRESS SIGN SAMAVEDIC ANUDATTA KA
	77	DEVANAGARI STRESS SIGN SAMAVEDIC U
	78	(This position shall not be used)
	79	(This position shall not be used)
	7A	(This position shall not be used)
	7B	DEVANAGARI STRESS SIGN SHUKLA YAJURVEDIC SVARITA
	7C	DEVANAGARI STRESS SIGN MAITRAYANI SVARITA ONE
	7D	DEVANAGARI STRESS SIGN NON-TAITIRIYA YAJURVEDIC SVARITA
	7E	DEVANAGARI STRESS SIGN MAITRAYANI SVARITA TWO
	7F	DEVANAGARI STRESS SIGN KATHAKA SVARITA

Plane 00

Row 09