Universal Multiple-Octet Coded Character Set
International Organization for Standardization
Organisation internationale de normalisation
Международная организация по стандартизации

Doc Type: Working Group Document
Title: Summary proposal to encode characters for Vedic in the BMP of the UCS
Source: Ireland and UC Berkeley Script Encoding Initiative (Universal Scripts Project)
Authors: Michael Everson and Peter Scharf
Status: National Body and Liaison Contribution
Action: For consideration by JTC1/SC2/WG2 and UTC
Replaces: N3366
Date: 2008-03-06

1. Introduction. This document reflects the consensus achieved after intense discussion of the Vedic characters proposed by CDAC in India on the one hand by Everson, Scharf, et al. on the other, in a large number of documents presented since 2006. The repertoire given here comprises a set of characters which all parties agree should be encoded to enable India and Western Vedic specialists to represent the texts and critical apparatus of this important field of study.

A few outstanding issues remain but it is agreed that these might be left for further study. The characters presented in this document are, in our opinion, well-documented and appropriate for encoding.

It is worthwhile reviewing some of the issues which were previously controversial.

2. PRISHTHAMATRA E. It is our view that the best way to handle this is to encode a single vowel sign for *e* that can be used in combination with other characters for *o*, *ai*, and *au*, as presented in N3235R. We do not believe that the spoofing danger of this character is as great as has been suggested: one could recommend to registrars, for instance, that the character can be restricted from use in IDN. We propose to encode DEVANAGARI VOWEL SIGN PRISHTHAMATRA E at U+094E. Our view is that using U+0947 for this with a radical glyph difference for prishthamatra orthography would simply be shifting the spoofing concern to a far more dangerous place. Protocols could restrict the use of U+094E DEVANAGARI VOWEL SIGN PRISHTHAMATRA E; they can't do the same for U+0947 DEVANAGARI VOWEL SIGN E.

3. Spacing candrabindus and anusvaras. The characters proposed at U+1CE8..U+1CEB, U+1CED.. U+1CEF, and U+A8F3..U+A8F9, were proposed as combining characters by CDAC because there should not be a linebreak before them. Because they themselves may bear diacritical marks (for example: ताॗ) and indeed because they are sometime separated (in manuscripts) by a not inconsiderable space from the characters on either side of them, they are proposed here as ordinary spacing characters. Line-breaks should not be allowed before them, however.

4. Cantillation marks for Samavedic. Ruby is a system of annotation. The combining digits and letters used in Sāmavedic are a system of cantillation marks, just like those used in Hebrew. The fact that the glyphs for these marks in the Sāmavedic tradition were derived from digits and letters is incidental. They could equally well be stars and snakes and dots and double dots and tick marks. There is no "two-ness" inherent in COMBINING DEVANAGARI DIGIT TWO. It is used to indicate a *svarita* syllable, or an *udātta* syllable when followed by an *anudātta* syllable. Similarly, there is no "ka-ness" inherent in COMBINING

DEVANAGARI DIGIT KA. It indicates *anudātta* preceding an independent *svarita*. Further, there are non-numeric and non-literal tone marks also used in Sāmaveda—KARSHANA, SHARA, PRENKHA—and it does not make sense to have some cantillation marks represented as combining characters and others as Ruby annotation. This is a *Gedankenexperiment* gone overboard. In point of fact, we can easily imagine text-to-speech software that could sing Sāmavedic text marked up with its in-band diacritics. Out-of-band Ruby annotations are ancillary footnotes to text—the Sāmavedic cantillation marks are essential diacritics, part of the text, not annotations to it.

Much ink has been spilt over this, but it has been based on a superficial analysis of the glyphs. What is more puzzling is that Latin and Cyrillic combining letters have been encoded, without the same level of push-back. We believe that we must reject Ruby as a means for representing Sāmavedic cantillation marks. Ruby is appropriate and necessary for Jaiminīya. It is not for Sāmaveda.

5. Unicode Character Properties. Character properties are proposed here.

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0900;DEVANAGARI SIGN INVERTED CANDRABINDU;Mn;0;NSM;;;;;N;;;;;
094E;DEVANAGARI VOWEL SIGN PRISHTHAMATRA E;Mc;0;L;;;;;N;;;;;
0955;DEVANAGARI VOWEL SIGN CANDRA LONG E;Mn;0;NSM;;;;;N;;;;;
0973;DEVANAGARI SIGN PUSHPIKA;Po;0;L;;;;;N;;;;;
0974;DEVANAGARI CARET;Po;0;L;;;;;N;;;;;
0979;DEVANAGARI LETTER ZHA;Lo;0;L;;;;;N;;;;;
097A;DEVANAGARI LETTER HEAVY YA;Lo;0;L;;;;;N;;;;;
1CD0;VEDIC TONE KARSHANA;Mn;230;NSM;;;;;N;;;;;
1CD1;VEDIC TONE SHARA;Mn;230;NSM;;;;;N;;;;;
1CD2;VEDIC TONE PRENKHA;Mn;230;NSM;;;;;N;;;;;
1CD3;VEDIC TONE NIHSHVASA;Po;0;L;;;;;N;;;;;
1CD5;VEDIC TONE YAJURVEDIC AGGRAVATED INDEPENDENT SVARITA;Mn;220;NSM;;;;;N;;;;;
1CD6;VEDIC TONE YAJURVEDIC INDEPENDENT SVARITA;Mn;220;NSM;;;;;N;;;;;
1CD7;VEDIC TONE YAJURVEDIC KATHAKA INDEPENDENT SVARITA;Mn;220;NSM;;;;;N;;;;;
1CD8;VEDIC TONE CANDRA BELOW;Mn;220;NSM;;;;;N;;;;;
1CD9;VEDIC TONE YAJURVEDIC KATHAKA INDEPENDENT SVARITA SCHROEDER;Mn;220;NSM;;;;;N;;;;;
1CDA;VEDIC TONE DOUBLE SVARITA;Mn;230;NSM;;;;;N;;;;;
1CDB;VEDIC TONE TRIPLE SVARITA;Mn;230;NSM;;;;;N;;;;;
1CDC;VEDIC TONE KATHAKA ANUDATTA;Mn;220;NSM;;;;;N;;;;;
1CDD;VEDIC TONE DOT BELOW;Mn;220;NSM;;;;;N;;;;;
1CDE;VEDIC TONE TWO DOTS BELOW;Mn;220;NSM;;;;;N;;;;;
1CDF;VEDIC TONE THREE DOTS BELOW;Mn;220;NSM;;;;;N;;;;;
1CF0;VEDIC TONE RIGVEDIC KASHMIRI INDEPENDENT SVARITA;Mn;230;NSM;;;;;N;;;;;
1CF1;VEDIC TONE ATHARVAVEDIC INDEPENDENT SVARITA;Mc;0;L;;;;;N;;;;;
1CE2;VEDIC TONE VISARGA SVARITA;Mn;1;NSM;;;;;N;;;;;
1CE3;VEDIC TONE VISARGA UDATTA;Mn;1;NSM;;;;;N;;;;;
1CE4;VEDIC TONE REVERSED VISARGA UDATTA;Mn;1;NSM;;;;;N;;;;;
1CE5;VEDIC TONE VISARGA ANUDATTA;Mn;1;NSM;;;;;N;;;;;
1CE6;VEDIC TONE REVERSED VISARGA ANUDATTA;Mn;1;NSM;;;;;N;;;;;
1CE7;VEDIC TONE VISARGA UDATTA WITH TAIL;Mn;1;NSM;;;;;N;;;;;
1CE8;VEDIC TONE VISARGA ANUDATTA WITH TAIL;Mn;1;NSM;;;;;N;;;;;
1CE9;VEDIC SIGN ANUSVARA ANTARGOMUKHA;Lo;0;L;;;;;N;;;;;
1CEA;VEDIC SIGN ANUSVARA BAHIRGOMUKHA;Lo;0;L;;;;;N;;;;;
1CEB;VEDIC SIGN ANUSVARA VAMAGOMUKHA;Lo;0;L;;;;;N;;;;;
1CEC;VEDIC SIGN ANUSVARA VAMAGOMUKHA WITH TAIL;Lo;0;L;;;;;N;;;;;
1CED;VEDIC SIGN TIRYAK;Mn;220;NSM;;;;;N;;;;;
1CEE;VEDIC SIGN HEXIFORM LONG ANUSVARA;Lo;0;L;;;;;N;;;;;
1CEF;VEDIC SIGN LONG ANUSVARA;Lo;0;L;;;;;N;;;;;
1CF0;VEDIC SIGN RTHANG LONG ANUSVARA;Lo;0;L;;;;;N;;;;;
1CF1;VEDIC SIGN ARDHAVISARGA;Mc;0;L;;;;;N;;;;;
A8E0;COMBINING DEVANAGARI DIGIT ZERO;Mn;230;NSM;;;;;N;;;;;
A8E1;COMBINING DEVANAGARI DIGIT ONE;Mn;230;NSM;;;;;N;;;;;
A8E2;COMBINING DEVANAGARI DIGIT TWO;Mn;230;NSM;;;;;N;;;;;
A8E3;COMBINING DEVANAGARI DIGIT THREE;Mn;230;NSM;;;;;N;;;;;
A8E4;COMBINING DEVANAGARI DIGIT FOUR;Mn;230;NSM;;;;;N;;;;;
A8E5;COMBINING DEVANAGARI DIGIT FIVE;Mn;230;NSM;;;;;N;;;;;
A8E6;COMBINING DEVANAGARI DIGIT SIX;Mn;230;NSM;;;;;N;;;;;
A8E7;COMBINING DEVANAGARI DIGIT SEVEN;Mn;230;NSM;;;;;N;;;;;
A8E8;COMBINING DEVANAGARI DIGIT EIGHT;Mn;230;NSM;;;;;N;;;;;
A8E9;COMBINING DEVANAGARI DIGIT NINE;Mn;230;NSM;;;;;N;;;;;
A8EA;COMBINING DEVANAGARI LETTER A;Mn;230;NSM;;;;;N;;;;;
A8EB;COMBINING DEVANAGARI LETTER U;Mn;230;NSM;;;;;N;;;;;
A8EC;COMBINING DEVANAGARI LETTER KA;Mn;230;NSM;;;;;N;;;;;
A8ED;COMBINING DEVANAGARI LETTER NA;Mn;230;NSM;;;;;N;;;;;
A8EE;COMBINING DEVANAGARI LETTER PA;Mn;230;NSM;;;;;N;;;;;
A8EF;COMBINING DEVANAGARI LETTER RA;Mn;230;NSM;;;;;N;;;;;
A8F0;COMBINING DEVANAGARI LETTER VI;Mn;230;NSM;;;;;N;;;;;
A8F1;COMBINING DEVANAGARI SIGN AVAGRAHA;Mn;230;NSM;;;;;N;;;;;
A8F2;DEVANAGARI SIGN SPACING CANDRABINDU;Lo;0;L;;;;;N;;;;;
A8F3;DEVANAGARI SIGN CANDRABINDU VIRAMA;Lo;0;L;;;;;N;;;;;
A8F4;DEVANAGARI SIGN DOUBLE CANDRABINDU VIRAMA;Lo;0;L;;;;;N;;;;;
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A8F5;DEVANAGARI SIGN CANDRABINDU TWO;Lo;0;L;;;;;N;;;;;
A8F6;DEVANAGARI SIGN CANDRABINDU THREE;Lo;0;L;;;;;N;;;;;
A8F7;DEVANAGARI SIGN CANDRABINDU AVAGRAHA;Lo;0;L;;;;;N;;;;;
A8F8;DEVANAGARI SIGN ANUSVARA UBHAYATO MUKHA;Lo;0;L;;;;;N;;;;;
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A. Administrative
1. Title
Summary proposal to encode characters for Vedic in the BMP of the UCS
2. Requester's name
Ireland and UC Berkeley Script Encoding Initiative (Universal Scripts Project)
3. Requester type (Member body/Liaison/Individual contribution)
National Body and Liaison contribution.
4. Submission date
2008-03-06
5. Requester's reference (if applicable)
6. Choose one of the following:
6a. This is a complete proposal
Yes.
6b. More information will be provided later
No.

B. Technical – General
1. Choose one of the following:
1a. This proposal is for a new script (set of characters)
Yes.
1b. Proposed name of script
Vedic Extensions, Devanagari Extended.
1c. The proposal is for addition of character(s) to an existing block
Yes
1d. Name of the existing block
Devanagari.
2. Number of characters in proposal
64 (7, 33, 24).
3. Proposed category (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct; D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)
Category B.1.
4a. Is a repertoire including character names provided?
Yes.
4b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?
Yes.
4c. Are the character shapes attached in a legible form suitable for review?
Yes.
5a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?
Michael Everson.
5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:
Michael Everson, Fontographer.
6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?
Yes.
6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?
Yes.
7. Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?
Yes.
8. Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts,

Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see Unicode Character Database http://www.unicode.org/Public/UNIDATA/ UnicodeCharacterDatabase.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.
See above.

C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.
Yes, in a number of documents since the middle of 2006.
2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?
Yes.
2b. If YES, with whom?
Michel Angot, R. Chandrashekar, Malcolm Hyman, Susan Rosenfield, B. V. Venkatakrishna Sastry, Michael Witzel.
2c. If YES, available relevant documents
Specialists in Vedic Sanskrit
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?
Indologists, Indo-Europeanists, teachers, students.
4a. The context of use for the proposed characters (type of use; common or rare)
Rare; these are mostly used in Sanskrit dictionaries.
4b. Reference
5a. Are the proposed characters in current use by the user community?
Yes.
5b. If YES, where?
Scholarly publications.
6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?
Yes.
6b. If YES, is a rationale provided?
Yes.
6c. If YES, reference
Accordance with the Roadmap. Keep with other Indic characters.
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?
No.
8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?
No.
8b. If YES, is a rationale for its inclusion provided?
8c. If YES, reference
9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?
No.
9b. If YES, is a rationale for its inclusion provided?
9c. If YES, reference
10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?
No.
10b. If YES, is a rationale for its inclusion provided?
10c. If YES, reference
11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?
Yes.
11b. If YES, is a rationale for such use provided?
No.
11c. If YES, reference
11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?
No.
11e. If YES, reference
12a. Does the proposal contain characters with any special properties such as control function or similar semantics?
No.
12b. If YES, describe in detail (include attachment if necessary)
13a. Does the proposal contain any Ideographic compatibility character(s)?
No.
13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?

	090	091	092	093	094	095	096	097
0	ँ 0900	ऐ 0910	ठ 0920	र 0930	�ी 0940	ॐ 0950	ॠ 0960	० 0970
1	ं 0901	ऑ 0911	ड 0921	ऱ 0931	�ु 0941	॑ 0951	ॡ 0961	ॱ 0971
2	ँ 0902	ओ 0912	ढ 0922	ल 0932	�ू 0942	॒ 0952	ॢ 0962	ॲ 0972
3	ः 0903	ओ 0913	ण 0923	ळ 0933	ृ 0943	॓ 0953	ॣ 0963	छ 0973
4	ऄ 0904	औ 0914	त 0924	ऴ 0934	ॄ 0944	॔ 0954	। 0964	ˇ 0974
5	अ 0905	क 0915	थ 0925	व 0935	ॅ 0945	ॕ 0955	॥ 0965	
6	आ 0906	ख 0916	द 0926	श 0936	ॆ 0946		० 0966	
7	इ 0907	ग 0917	ध 0927	ष 0937	े 0947		१ 0967	
8	ई 0908	घ 0918	न 0928	स 0938	ै 0948	क़ 0958	२ 0968	
9	उ 0909	ङ 0919	ऩ 0929	ह 0939	ऺ 0949	ख़ 0959	३ 0969	ज़ 0979
A	ऊ 090A	च 091A	प 092A		ॊ 094A	ग़ 095A	४ 096A	य 097A
B	ऋ 090B	छ 091B	फ 092B		ो 094B	ज़ 095B	५ 096B	ग 097B
C	ऌ 090C	ज 091C	ब 092C	़ 093C	ौ 094C	ड़ 095C	६ 096C	ज 097C
D	ऍ 090D	झ 091D	भ 092D	ऽ 093D	् 094D	ढ़ 095D	७ 096D	? 097D
E	ऎ 090E	ञ 091E	म 092E	ा 093E	ॎ 094E	फ़ 095E	८ 096E	ड 097E
F	ए 090F	ट 091F	य 092F	ि 093F		य़ 095F	९ 096F	ब 097F

Based on ISCII 1988

Various signs

0900	̐	DEVANAGARI SIGN INVERTED CANDRABINDU
		= vaidika adhomukha candrabindu
0901	̐	DEVANAGARI SIGN CANDRABINDU
		= anunasika
		→ 0310 ̐ combining candrabindu
0902	ं	DEVANAGARI SIGN ANUSVARA
		= bindu
0903	ः	DEVANAGARI SIGN VISARGA

Independent vowels

0904	ऄ	DEVANAGARI LETTER SHORT A
0905	अ	DEVANAGARI LETTER A
0906	आ	DEVANAGARI LETTER AA
0907	इ	DEVANAGARI LETTER I
0908	ई	DEVANAGARI LETTER II
0909	उ	DEVANAGARI LETTER U
090A	ऊ	DEVANAGARI LETTER UU
090B	ऋ	DEVANAGARI LETTER VOCALIC R
090C	ऌ	DEVANAGARI LETTER VOCALIC L
090D	ऍ	DEVANAGARI LETTER CANDRA E
090E	ऎ	DEVANAGARI LETTER SHORT E
		• for transcribing Dravidian short e
090F	ए	DEVANAGARI LETTER E
0910	ऐ	DEVANAGARI LETTER AI
0911	ऑ	DEVANAGARI LETTER CANDRA O
0912	ऒ	DEVANAGARI LETTER SHORT O
		• for transcribing Dravidian short o
0913	ओ	DEVANAGARI LETTER O
0914	औ	DEVANAGARI LETTER AU

Consonants

0915	क	DEVANAGARI LETTER KA
0916	ख	DEVANAGARI LETTER KHA
0917	ग	DEVANAGARI LETTER GA
0918	घ	DEVANAGARI LETTER GHA
0919	ङ	DEVANAGARI LETTER NGA
091A	च	DEVANAGARI LETTER CA
091B	छ	DEVANAGARI LETTER CHA
091C	ज	DEVANAGARI LETTER JA
091D	झ	DEVANAGARI LETTER JHA
091E	ञ	DEVANAGARI LETTER NYA
091F	ट	DEVANAGARI LETTER TTA
0920	ठ	DEVANAGARI LETTER TTHA
0921	ड	DEVANAGARI LETTER DDA
0922	ढ	DEVANAGARI LETTER DDHA
0923	ण	DEVANAGARI LETTER NNA
0924	त	DEVANAGARI LETTER TA
0925	थ	DEVANAGARI LETTER THA
0926	द	DEVANAGARI LETTER DA
0927	ध	DEVANAGARI LETTER DHA
0928	न	DEVANAGARI LETTER NA
0929	ऩ	DEVANAGARI LETTER NNNA
		• for transcribing Dravidian alveolar n
		≡ 0928 न 093C ़
092A	प	DEVANAGARI LETTER PA
092B	फ	DEVANAGARI LETTER PHA
092C	ब	DEVANAGARI LETTER BA
092D	भ	DEVANAGARI LETTER BHA
092E	म	DEVANAGARI LETTER MA
092F	य	DEVANAGARI LETTER YA
0930	र	DEVANAGARI LETTER RA
0931	ऱ	DEVANAGARI LETTER RRA
		• for transcribing Dravidian alveolar r
		• half form is represented as "Eyelash RA"
		≡ 0930 र 093C ़
0932	ल	DEVANAGARI LETTER LA
0933	ळ	DEVANAGARI LETTER LLA
0934	ऴ	DEVANAGARI LETTER LLLA
		• for transcribing Dravidian l
		≡ 0933 ळ 093C ़
0935	व	DEVANAGARI LETTER VA
0936	श	DEVANAGARI LETTER SHA
0937	ष	DEVANAGARI LETTER SSA
0938	स	DEVANAGARI LETTER SA
0939	ह	DEVANAGARI LETTER HA

Various signs

093C	़	DEVANAGARI SIGN NUKTA
		• for extending the alphabet to new letters
093D	ऽ	DEVANAGARI SIGN AVAGRAHA

Dependent vowel signs

093E	ा	DEVANAGARI VOWEL SIGN AA
093F	ि	DEVANAGARI VOWEL SIGN I
		• stands to the left of the consonant
0940	ी	DEVANAGARI VOWEL SIGN II
0941	ु	DEVANAGARI VOWEL SIGN U
0942	ू	DEVANAGARI VOWEL SIGN UU
0943	ृ	DEVANAGARI VOWEL SIGN VOCALIC R
0944	ॄ	DEVANAGARI VOWEL SIGN VOCALIC RR
0945	ॅ	DEVANAGARI VOWEL SIGN CANDRA E
		= candra
0946	ॆ	DEVANAGARI VOWEL SIGN SHORT E
		• for transcribing Dravidian vowels
0947	े	DEVANAGARI VOWEL SIGN E
0948	ै	DEVANAGARI VOWEL SIGN AI
0949	ॉ	DEVANAGARI VOWEL SIGN CANDRA O
094A	ॊ	DEVANAGARI VOWEL SIGN SHORT O
		• for transcribing Dravidian vowels
094B	ो	DEVANAGARI VOWEL SIGN O
094C	ौ	DEVANAGARI VOWEL SIGN AU

Various signs

094D	्	DEVANAGARI SIGN VIRAMA
		= halant (the preferred Hindi name)
		• suppresses inherent vowel
094E	ॎ	DEVANAGARI VOWEL SIGN PRISHTHAMATRA E
		• character has historic use only
		• combines with E to form AI, with AA to form O, and with O to form AU
094F	▨	<reserved>
0950	ॐ	DEVANAGARI OM
0951	॑	DEVANAGARI STRESS SIGN UDATTA
		• mostly used for Rigvedic svarita, with rare use for Yajurvedic udatta
0952	॒	DEVANAGARI STRESS SIGN ANUDATTA
0953	॓	DEVANAGARI GRAVE ACCENT

0954 ◌́ DEVANAGARI ACUTE ACCENT
0955 ◌ॕ DEVANAGARI VOWEL SIGN CANDRA LONG E
• used in transliteration of Avestan

Additional consonants

0958 क़ DEVANAGARI LETTER QA
≡ 0915 क 093C ◌

0959 ख़ DEVANAGARI LETTER KHHA
≡ 0916 ख 093C ◌

095A ग़ DEVANAGARI LETTER GHHA
≡ 0917 ग 093C ◌

095B ज़ DEVANAGARI LETTER ZA
≡ 091C ज 093C ◌

095C ड़ DEVANAGARI LETTER DDDHA
≡ 0921 ड 093C ◌

095D ढ़ DEVANAGARI LETTER RHA
≡ 0922 ढ 093C ◌

095E फ़ DEVANAGARI LETTER FA
≡ 092B फ 093C ◌

095F य़ DEVANAGARI LETTER YYA
≡ 092F य 093C ◌

Additional vowels for Sanskrit

0960 ॠ DEVANAGARI LETTER VOCALIC RR
0961 ॡ DEVANAGARI LETTER VOCALIC LL
0962 ◌ॢ DEVANAGARI VOWEL SIGN VOCALIC L
0963 ◌ॣ DEVANAGARI VOWEL SIGN VOCALIC LL

Generic punctuation for scripts of India

These punctuation marks are for common use for the scripts of India despite being named "DEVANAGARI".

0964 । DEVANAGARI DANDA
= purna viram
• phrase separator

0965 ॥ DEVANAGARI DOUBLE DANDA
= deergh viram

Digits

0966 ० DEVANAGARI DIGIT ZERO
0967 १ DEVANAGARI DIGIT ONE
0968 २ DEVANAGARI DIGIT TWO
0969 ३ DEVANAGARI DIGIT THREE
096A ४ DEVANAGARI DIGIT FOUR
096B ५ DEVANAGARI DIGIT FIVE
096C ६ DEVANAGARI DIGIT SIX
096D ७ DEVANAGARI DIGIT SEVEN
096E ८ DEVANAGARI DIGIT EIGHT
096F ९ DEVANAGARI DIGIT NINE

Devanagari-specific additions

0970 ॰ DEVANAGARI ABBREVIATION SIGN
0971 ॱ DEVANAGARI SIGN HIGH SPACING DOT

Additional vowel for Marathi

0972 ऑ DEVANAGARI LETTER CANDRA A
• Marathi

Various signs

0973 ॳ DEVANAGARI SIGN PUSHPIKA
= vaidika pushpikaa
• used as a placeholder or "filler"
• often flanked by double dandas

0974 ˘ DEVANAGARI CARET
= vaidika trutikaa
• zero-advance character centred on the point between two orthographic syllables

Additional consonants

0979 ज़ DEVANAGARI LETTER ZHA
• used in transliteration of Avestan

097A य DEVANAGARI LETTER HEAVY YA
• used for an affricated glide
→ 09AF ◌ bengali letter ya

Sindhi implosives

These are added from Amendment 3 to 10646:2003.

097B ग DEVANAGARI LETTER GGA
097C ज DEVANAGARI LETTER JJA

Glottal stop

097D ʔ DEVANAGARI LETTER GLOTTAL STOP
• used for writing Limbu in Devanagari
• a glyph variant has the connecting top bar

Sindhi implosives

These are added from Amendment 3 to 10646:2003.

097E ड DEVANAGARI LETTER DDDA
097F ब DEVANAGARI LETTER BBA

	1CD	1CE	1CF
0	◌ 1CD0	◌ 1CE0	◌ 1CF0
1	◌ 1CD1	◌ 1CE1	◌ 1CF1
2	◌ 1CD2	◌ 1CE2	
3	◌ 1CD3	◌ 1CE3	
4		◌ 1CE4	
5	◌ 1CD5	◌ 1CE5	
6	◌ 1CD6	◌ 1CE6	
7	◌ 1CD7	◌ 1CE7	
8	◌ 1CD8	◌ 1CE8	
9	◌ 1CD9	◌ 1CE9	
A	◌ 1CDA	◌ 1CEA	
B	◌ 1CDB	◌ 1CEB	
C	◌ 1CDC	◌ 1CEC	
D	◌ 1CDD	◌ 1CED	
E	◌ 1CDE	◌ 1CEE	
F	◌ 1CDF	◌ 1CEF	

Tone marks for the Samaveda

1CD0   VEDIC TONE KARSHANA
     = vaidika saamasvara karshanna
1CD1   VEDIC TONE SHARA
     = vaidika svarita uurdhva shara
1CD2   VEDIC TONE PRENKHA
     • indicates vibrato
     = vaidika saamasvara prenkha
1CD3   VEDIC SIGN NIHSHVASA
     = vaidika saamasvara yogakaala

Signs for Yajurvedic

1CD5   VEDIC TONE YAJURVEDIC AGGRAVATED
     INDEPENDENT SVARITA
     = vaidika svarita adho nyubja
1CD6   VEDIC TONE YAJURVEDIC INDEPENDENT
     SVARITA
     = vaidika svarita adhah konna
1CD7   VEDIC TONE YAJURVEDIC KATHAKA
     INDEPENDENT SVARITA
     = vaidika svarita adho vakra rekhaa
1CD8   VEDIC TONE CANDRA BELOW
     = vaidika svarita adhah ardha vakra
1CD9   VEDIC TONE YAJURVEDIC KATHAKA
     INDEPENDENT SVARITA SCHROEDER
     = vaidika svarita adho samyukta rekhaa
1CDA   VEDIC TONE DOUBLE SVARITA
     = vaidika svarita uurdhva dvi rekhaa
1CDB   VEDIC TONE TRIPLE SVARITA
     = vaidika svarita uurdhva tri rekhaa
1CDC   VEDIC TONE KATHAKA ANUDATTA
     = vaidika svarita adho rekhaa
1CDD   VEDIC TONE DOT BELOW
     = vaidika svarita adho bindu

Tone marks for the Satapathabrahmana

1CDE   VEDIC TONE TWO DOTS BELOW
     = vaidika svarita adho dvi bindu
1CDF   VEDIC TONE THREE DOTS BELOW
     = vaidika svarita adhas tri bindu

Tone mark for the Rigveda

1CE0   VEDIC TONE RIGVEDIC KASHMIRI
     INDEPENDENT SVARITA
     = vaidika uurdhva vakra rekhaa

Tone mark for the Atharvaveda

1CE1   VEDIC TONE ATHARVAVEDIC
     INDEPENDENT SVARITA
     = vaidika svarita dvi vakra khanda

Diacritics for visarga

1CE2   VEDIC SIGN VISARGA SVARITA
     = vaidika madhyerekhaa
1CE3   VEDIC SIGN VISARGA UDATTA
     = vaidika visarga dakshinnatah uurdhvaga
1CE4   VEDIC SIGN REVERSED VISARGA
     UDATTA
     = vaidika visarga vaamatah uurdhvaga
1CE5   VEDIC SIGN VISARGA ANUDATTA
     = vaidika visarga vaamatah adhoga

1CE6   VEDIC SIGN REVERSED VISARGA
     ANUDATTA
     = vaidika visarga dakshinnatah adhoga
1CE7   VEDIC SIGN VISARGA UDATTA WITH
     TAIL
     = vaidika visarga dakshinnatah uurdhva vakra
1CE8   VEDIC SIGN VISARGA ANUDATTA WITH
     TAIL
     = vaidika visarga vaamatah adho vakra

Marks of nasalization

1CE9   VEDIC SIGN ANUSVARA
     ANTARGOMUKHA
     = vaidika anusvaara antarmukha
1CEA   VEDIC SIGN ANUSVARA
     BAHIRGOMUKHA
     = vaidika anusvaara naagaphanna
1CEB   VEDIC SIGN ANUSVARA
     VAMAGOMUKHA
     = vaidika anusvaara vaamamukha
1CEC   VEDIC SIGN ANUSVARA
     VAMAGOMUKHA WITH TAIL
     = vaidika anusvaara vaamamukha savakra
1CED   VEDIC SIGN TIRYAK
     = vaidika tiryak
1CEE   VEDIC SIGN HEXIFORM LONG
     ANUSVARA
     = vaidika anusvaara shattsadrisha
1CEF   VEDIC SIGN LONG ANUSVARA
     = vaidika anusvaara dakshinnamukha
1CF0   VEDIC SIGN RTHANG LONG ANUSVARA
     = vaidika anusvaara tthasadrisha

Ardhavisarga

1CF1   VEDIC SIGN ARDHAVISARGA
     = vaidika jihvaamuliya upadhamaaniiya

	A8E	A8F
0	० A8E0	वि A8F0
1	१ A8E1	ऽ A8F1
2	२ A8E2	ꣲ A8F2
3	३ A8E3	A8F3
4	४ A8E4	A8F4
5	५ A8E5	A8F5
6	६ A8E6	A8F6
7	७ A8E7	A8F7
8	८ A8E8	A8F8
9	९ A8E9	
A	अ A8EA	
B	उ A8EB	
C	क A8EC	
D	न A8ED	
E	प A8EE	
F	र A8EF	

Cantillation marks for the Samaveda

A8E0   COMBINING DEVANAGARI DIGIT ZERO
     = vaidika saamasvara anka shuunya
A8E1   COMBINING DEVANAGARI DIGIT ONE
     = vaidika saamasvara anka eka udatta
A8E2   COMBINING DEVANAGARI DIGIT TWO
     = vaidika saamasvara anka dvi svarita
A8E3   COMBINING DEVANAGARI DIGIT THREE
     = vaidika saamasvara anka tri anudatta
A8E4   COMBINING DEVANAGARI DIGIT FOUR
     = vaidika saamasvara anka chatur
A8E5   COMBINING DEVANAGARI DIGIT FIVE
     = vaidika saamasvara anka pancha
A8E6   COMBINING DEVANAGARI DIGIT SIX
     = vaidika saamasvara anka shatt
A8E7   COMBINING DEVANAGARI DIGIT SEVEN
     = vaidika saamasvara anka sapta
A8E8   COMBINING DEVANAGARI DIGIT EIGHT
     = vaidika saamasvara anka ashta
A8E9   COMBINING DEVANAGARI DIGIT NINE
     = vaidika saamasvara anka nava
A8EA   COMBINING DEVANAGARI LETTER A
     = vaidika saamasvara abhinihita
A8EB   COMBINING DEVANAGARI LETTER U
     = vaidika saamasvara u
A8EC   COMBINING DEVANAGARI LETTER KA
     = vaidika saamasvara ka
A8ED   COMBINING DEVANAGARI LETTER NA
     = vaidika saamasvara namana
A8EE   COMBINING DEVANAGARI LETTER PA
     = vaidika saamasvara prannatam
A8EF   COMBINING DEVANAGARI LETTER RA
     = vaidika saamasvara ra
A8F0   COMBINING DEVANAGARI LETTER VI
     = vaidika saamasvara vinata
A8F1   COMBINING DEVANAGARI SIGN
     AVAGRAHA
     = vaidika saamasvara diirghiibhaava

Marks of nasalization

A8F2   DEVANAGARI SIGN SPACING
     CANDRABINDU
     = vaidika candrabindu
A8F3   DEVANAGARI SIGN CANDRABINDU
     VIRAMA
     = vaidika anusvaara candrabindu tiryak
A8F4   DEVANAGARI SIGN DOUBLE
     CANDRABINDU VIRAMA
     = vaidika anusvaara dvi candrabindu tiryak
A8F5   DEVANAGARI SIGN CANDRABINDU TWO
     = vaidika anusvaara candrabindu sadvi
A8F6   DEVANAGARI SIGN CANDRABINDU
     THREE
     = vaidika anusvaara candrabindu satri
A8F7   DEVANAGARI SIGN CANDRABINDU
     AVAGRAHA
     = vaidika anusvaara candrabindu saavagraha
A8F8   DEVANAGARI SIGN ANUSVARA
     UBHAYATO MUKHA