#### Assamese

#### Vowels and Diphthongs (see Note 1)

অ	а	췘	ī
আ	ā	も	1
শ	i	এ	e
ঈ	ī	ଗ୍ର	ai
উ	u	છ	0
ঊ	ū	উ	au
ঋ	ŗ		

#### Consonants (see Note 2)

Gu	tturals	Pala	atals	Ce	rebrals	Γ	Dentals
ক	ka	ব	са	র্ত	ţa	ত	ta
খ	kha	ছ	cha	ঠ	ţha	ৎ	<u>t</u>
গ	ga	জ	ja	ড	ḍa	থ	tha
ঘ	gha	ঝ	jha	ড়	ŗa	দ	da
(Y)	'na	ತಿ	ña	ত	ḍha	ধ	dha
				ঢ়	ŗha	ন	na
				ণ	ņa		
La	abials	Semiv	owels	Sil	bilants	A	spirate
প	ра	য	ya	×ſ	śa	হ	ha
হা	pha	য়	ÿа	ষ	sha		
ব	ba	ৰ	ra	স	sa		
ভ	bha	ল	la				
ম	ma	ৱ	wa				
An	usvāra	Bisa	arga	<i>Candrabind</i> (see Note 3	du (anunāsika) S)	Abagral	<i>ha</i> (see Note 4)
९	ŵ	0	ķ	۳	ň, m	5,	(apostrophe)

#### Notes

1. Only the vowel forms that appear at the beginning of a syllable are listed; the forms used for vowels following a consonant can be found in grammars; no distinction between the two is made in transliteration.

- 2. The vowel *a* is implicit after all consonants and consonant clusters and is supplied in transliteration, with the following exceptions:
  - a) when another vowel is indicated by its appropriate sign; and
  - b) when the absence of any vowel is indicated by the subscript symbol ( ) called *hasanta* or *birāma*.
- Candrabindu before guttural, palatal, cerebral, and dental occlusives is transliterated n.
   Before labials, sibilants, semivowels, the aspirate, vowels, and in final position it is transliterated n.
- 4. When doubled, *abagraha* is transliterated by two apostrophes (").

# Wikipedia:Indic transliteration

This page documents an English Wikipedia guideline. It is a generally accepted standard that editors should follow, though it should be treated with common sense, and occasional exceptions may apply. Changes made to it should reflect consensus. When in doubt, discuss your idea on the talk page.

This is a guideline for the transliteration (or Romanization) of writings from Indic languages and Indic scripts for use in the English-language Wikipedia. It is based on ISO 15919, and is applicable to all languages of south Asia that are written in Indic scripts.

All transliteration should be from the written form in the original script of the original language of the name or term. The original text in the original script may also be included for reference and checking.

## **Formal transliteration**

The formal transliteration may be used to accurately and unambiguously present the phonetic content of the original script. It should be provided for reference whenever reference to the original source is needed.

The scheme is based on ISO 15919 for Indic scripts. This is very close to IAST with minor differences to accommodate non-Devanagari scripts. The differences are:

- ए IAST: e, ISO: ē
- ओ IAST: o, ISO: ō
- अं IAST: m, ISO: m (m is used to specifically represent Gurmukhi Tippi)
- ऋ IAST: r, ISO: r
- 🛪 IAST: ī, ISO: ī

### Simplified transliteration

A set of simplified transliteration symbols is provided here. These are not part of the ISO standard. They have been devised for Wikipedia, and they may be used to avoid the use of diacritic marks. Simplified transliterations should not be considered to be authoritative, and may result in ambiguous transliteration.

## **Inherent vowel**

When the source script does not indicate the removal of the inherent 'a' and it is not pronounced in the original source language then such unpronounced 'a's are removed.

The inherent vowel is always transliterated as 'a' in the formal ISO 15919 transliteration. In the simplified transliteration, 'a' is also normally used except in the Bengali, Assamese, and Oriya languages, where 'o'/'ô' is used. See Romanization of Bengali for the transliteration scheme set for Bengali on Wikipedia.

## Vowels

Vowels are presented in their independent form on the left of each column, and combined with the corresponding consonant ka on the right. An asterisk indicates that the letter or ligature exists, but has not been encoded in unicode or is archaic/obsolete.

ISO 15919	Simplified	ІРА	Devar	nagari	Bengali/	Assamese	Gurn	nukhi	Guja	arati	0	riya	Та	mil	Telu	ıgu	Kan	nada	Mala	yalam	Sin	hala
a	а	ə/ɐ/ä/ɔ/o	अ	क	অ	ক	ਅ	ਕ	0	0	ଅ	କ	அ	க	అ	క	ಅ	ಕ	അ	ക	¢	ක
ā	а	aː/a	आ	का	আ	কা	ਆ	ਕਾ	0	00	ଆ	କା	್ರ	கா	ಆ	కా	ಆ	ಕಾ	ആ	കാ	ක	කා
æ	ae	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	۵	කැ
ā	ae	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	කැ
i	i	i	ম্প	क	אפ∕.	ক	ਇ	ਕ		00	ଇ	କି	Q	കി	ଷ	కి	<i>.</i> 2	ಕೆ	ഇ	കി	ø	කි
ī	i	iː/i	ΨW	की	ঈ	কী	ਈ	ਕੀ		00	ଈ	କୀ	ন্দ	கீ	෮ඁෳ	కో	ਚ	ಕೇ	ഈ	കീ	ð	කි
u	u	u	ন	कु	উ	কু	ĝ	ਕੁ		00	ଉ	କୁ	ഉ	ም	ę	కు	ಉ	ಕು	୭	കു	Ô	ଯ
ū	u	uː/u	क्ष	कू	উ	কূ	ਊ	ਕੂ		00	ଊ	କୂ	<u>ഉണ</u>	கூ	쓶	కూ	ಊ	ಕೂ	ഊ	കൂ	0	ଲ୍ଲ
ĕ	e	æ/ɛ	Ŕ	कॅ	-	-	-	-	-	-	-	-	அெ	கல	-	-	-	-	-	-	-	-
e	e	e	Ŀ	के	-	-	-	-	-	-	-	-	െ	கசெ	ఎ	కో	ಎ	ಕೆ	എ	കരെ	లి	ක
ē	e	eː/e/ɛ	ए	के	ය	ক	ਏ	ਕੇ		00	Ø	କ	ত	கே	ప	కో	ప	ಕೇ	ഏ	ക	0	ක
ai	ai	ɛː/əj/æ/ɔj/oj	ऐ	कै	ନ୍ତ୍ର	ক	ਐ	ਕੈ		00	ঝ	କଚି	ස	கன	ສ	కై	<b>ဆ</b>	ಕ್ರಿ	ഐ	കരൈ	0	ක
ŏ	0	Э	ऑ	कॉ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	0	0	স্সী	कॊ	-	-	-	-	-	-	-	-	ଡ଼	களெ	ఒ	కొ	ఒ	ಕೊ	ഒ	കരാ	۲	ක[
ō	0	oː/o	ओ	को	હ	কር	ਉ	ਕੋ		00	ß	କମ	ୢଌ	களே	ఓ	కో	ఓ	ಕೋ	ഓ	ക്ര	0	ක
au	au	o/əw/ow/ow	औ	कौ	જે	কট	ਔ	ਸੌ		00	ଔ	କମି	ନ୍ତୁଶୀ	களெ	ಕ್ಷ	కౌ	ಔ	ಕೌ	ഔ	കൗ	0	ක
ŗ	ri	ŗ/ri/ru	꾰	कृ	ঋ	কৃ	-	-		00	ର	କୃ	-	-	ఋ	కృ	ಋ	ಕೃ	ಆ	കൃ	0	කෘ
ŗ	ri	ŗː/riː/ruː/ri	¥	क्	ৠ	কৃ	-	-		-	ର	-	-	-	ౠ	-	ೠ	-	ပ္ဆ	ക	0	ක
ļ	?	1	જ	कॄ	\$	কু	-	-	-	00	S	-	-	-	N	కౄ	0	ુલ	ത	ക	0	ລາ
ľ	?	1:	1 1 1 1	क्	<i>S</i> 2	কৣ	-	-	-	-	Ş	-	-	-	ౡ	-	0	-	ആ	ക	۵	ක[

## Consonants

See also Brahmic family#Consonants.

ISO 15919	Simplified	IPA	Devanagari	Bengali/ Assamese	Gurmukhi	Gujarati	Oriya	Tamil	Telugu	Kannada	Malayalam	Sinhala
k	k	k	क	ক	ਕ	0	କ	க	క	ಕ	ക	ක
kh	kh	k <sup>h</sup>	ख	খ	ਖ	0	ଖ	கஃ	ఖ	ಖ	ഖ	බ
g	g	g	ग	গ	ਗ	0	ଗ	க	К	ಗ	S	ග
gh	gh	g <sup>h</sup>	घ	ঘ	થા[1]	0	ଘ	கஃ	ఘ		ഘ	0
'n	n	ŋ	ङ	ঙ	৯	0	ଙ	ங	ස	æ	ន	ධ
с	ch	ţj/s	च	ব	ਚ	0	ଚ	ਰ	చ	ಚ	لە	G
ch	chh	ťſ <sup>h</sup> /s	ਡ	म्र	ਛ	0	ନ୍ଦି	சுஃ	ఛ	ಛ	ഛ	ర
j	j	<b>ർ</b> ;/z	অ	জ	ਜ	0	ଜ	g	ಜ	ಜ	ъ В	ర

jh	jh	dʒʰ/z	झ	ঝ	হ[1]	0	g	ളംം	ఝ	ಝ	ഝ	0
ñ	n	ɲ/n/-	স	යා	ਞ	0	8	୍	প্র	ಭ್	ഞ	සද
ţ	t	ţ/t	5	র্ব	ਟ	0	ଟ	த	ట	ಟ	S	Э
ţh	th	ť <sup>h</sup> /ť <sup>h</sup>	ठ	<u>ک</u>	ਠ	0	0	தஃ	୪	ಠ	0	۵
ģ	d	<b>d</b> /d	ड	ড	ਡ	0	ତ	L	చ	ಡ	ഡ	ವಿ
ḍh	dh	dĥ/d <sup>ħ</sup>	ढ	ত	ਚ[1]	0	ଢ	L°°	ф	ಢ	ഡ	ది
ņ	n	η/n	ण	ণ	ਣ	0	ଣ	ண	ಣ	8	ണ	Ś
t	t	<u>t</u> /t	त	ত	ਤ	0	ତ	த	త	ತ	ത	ත
th	th	<u>t</u> <sup>h</sup> /t <sup>h</sup>	थ	থ	म	0	ଥ	தஃ	φ	ಥ	ம	ి
d	d	₫/d	द	দ	ਦ	0	ଦ	த	ద	ದ	ß	ę
dh	dh	dʰ/dʰ	ध	ধ	य[1]		ଧ	தஃ	ф	ಧ	ω	۵
n	n	n/n[2]	न	ন	ਨ		ନ	ந	న	ನ	m	න
n	n	n	ऩ	-	रु	00	-	ன	-	-	െ <sub>[3]</sub>	ອ.[4]
р	p	р	ч	প	ਪ	0	ପ	Ц	ప	ಪ	പ	8
ph	ph	p <sup>h</sup> /f	দ	ফ	ह	0	ଫ	Liôo	ఫ	ಫ	ഫ	లి
b	b	b	ब	ব	ਬ	0	ବ	Ц	ຏ	ಬ	ബ	බ
bh	bh	b <sup>h</sup>	भ	ভ	ਭ[1]	0	ଭ	Lôo	భ	ಭ	ß	හ
m	m	m	म	ম	ਮ	0	ମ	ம	మ	ಮ	۵	0
у	у	j/d3	य	য	ਯ	0	ୟ	ш	య	ಯ	w	ය
r	r	r/ <b>r</b> [5]	र	র/ৰ[6]	ਰ	0	ର	Ţ	ŏ	ರ	o	ರ
r	r	r	ž	-	ਰ਼	00	-	p	ఱ	ఱ	0	ර.[4]
ř[7]	r	r	र्	-	-	-	-	-	-	-	-	-
1	1	1	ल	ल	ਲ		ଲ	ഖ	ల	ಲ	ല	e
1	1	l	8	-	ਲ਼		ଳ	ள	ళ	ಳ	ള	e
1	1	4	ŵ	-	-	00	-	ĥ	-	ಟ	Q	©.[4]
v	v	ט/w[8]	व	ৱ[9]	ਵ	0	ବ	ഖ	వ	ವ	വ	2
Ś	sh	⊆/s/ʃ/x	য	শ	ਸ਼	0	ଶ	ரு[10]	ళ	ಶ	സ	ශ
Ş	sh	<b>ş</b> /s/∫/x	ष	ষ	-	0	ଷ	ବ୍ୟ	ష	ಷ	ഷ	8
S	s	s/ʃ/x	स	স	ਸ	0	ସ	സ	స	ਨ	സ	ස
h	h	ĥ	ह	হ	ਹ[11]	0	ହ	ഈ	హ	ಹ	ഹ	හ
q	q	q	क	ক.	ਕ਼	00	କ	கு	-	-	-	-
<u>k</u> h	kh	x	ख	খ.	ਖ਼	00	લ	க் ஷ	-	-	-	-
ġ	g	¥	ग	গ.	त्	00	ଗ଼	-	-	-	-	-
Z	z	Z	অ	জ.	ਜ਼	00	ଜ	û	-	-	-	-
ŗ	r	r	ड	ড.	ੜ	00	ଡ଼	-	-	-	-	-
ŗh	rh	۲ <sup>ĥ</sup>	ढ	.च	ੜ੍ਹ	00	છુ	-	-	-	-	-

f	f	f	দ্য	ফ.	ਫ਼	00	ਗ਼ੵ	ஃப	-	-	ഫ	e
ý	У	j/e	य	<sup>थ</sup> .	<b>फ़</b>		ଯ	-	-	-	-	-
<u>.t</u>	t	ţ	ਰ	ত.	ਤ਼	00	ତ	-	-	-	-	-
S	s	s	स	ਸ.	-	00	ସ	-	-	-	-	-
h	h	ĥ	ह	२.	ਹ਼	00	ୟୁ.	-	-	-	-	-
w	w	W	व	র[12]	Ę	00	ଖ୍ର	പ്പ	-	-	-	-
t	t	t	t	-	-	-	-	p	-	-	റ്റ[13] ( ഥ്വ	-
											)	

- ^ See special notes for Punjabi, specifically voiced aspirates.
- ^ In Indo-Aryan languages, this letter is theoretically pronounced as a dental nasal, but it is actually alveolar. In Tamil and Malayalam, it is a dental nasal and the alveolar nasal has a separate letter (<u>n</u>: see note below).
- ^ This letter is obsolete. See the Malayalam language article for further details.
- ^ In languages that contrast two rhotic consonants, this is generally [r]. In Indo-Aryan languages that do not make this distinction but have [r] and [r] as allophones, the /r/ phoneme is generally pronounced [r] when following a voiced consonant (although there are exceptions, such as the consonant j /dʒ/) and [r] in most other environments.
- ^ Use when the distinction between the reph and eyelash form of Ra is required; otherwise transliterate as 'r'.
- ^ Used when writing Tamil in Sinhala script.
- ^ Use র for Bengali and Manipuri, and ৰ for Assamese.
- ^ Assamese and Manipuri only.
- ^ May be pronounced 'w' in some languages.
- Also the Tamil ligature SRI ( $\upsilon \dot{\upsilon} \sigma^{\circ} = \upsilon \dot{\upsilon} \sigma^{\circ}$  or, prior to Unicode 4.1,  $\vec{\upsilon} \sigma^{\circ} = \vec{\upsilon} \sigma^{\circ}$ ) should be transliterated as  $\dot{s}r\bar{r}$  with  $\dot{s}$ , although  $sr\bar{r}$  may be also acceptable. See [14] and [15].
- ^ See special notes for Punjabi. Specifically 'ha'.
- ^
- A This is the symbol for the geminate consonant the letter for the single [t],  $\square$ , has become obsolete.

#### Assamese velar fricatives

ISO 15919	Simplified	IPA	Assamese
ś	х	х	শ
Ş	х	х	ষ
s	х	х	স

#### Sinhalese half-nasals

ISO 15919	Simplified	IPA	Sinhala
ňg	ng	ng	۵
jñ[16]	jn	gn	બ્દ્
ňj	nj	ndz	۵
ňḍ	nd	nq	0
ňd	nd	nd	ę
тъ	mb	mb	3

• ^ This character is technically a conjunct, but is encoded separately in Unicode.

#### Sindhi/Western Punjabi consonants

ISO 15919	Simplified	IPA	Devanagari	Gurmukhi
gg[17]	gg	ď	[] (ग)	ੱਗ
jj[18]	jj	ł	[] (ন্ত্র)	ੱਜ
ḍḍ[19]	dd	ď	। (ड)	ੱਡ
bb[20]	bb	b	[] (ब)	ੱਬ

- ^ Represents Sindhi/Western Punjabi bbē ([]).
- ^ Represents Sindhi/Western Punjabi jjē ([]).
- ^ Represents Sindhi dd.ē ([]) or Western Punjabi dd.āl ([]).
- ^ Represents Sindhi ggē ([]) or Western Punjabi ggāf ([]).

#### **Special notes for Punjabi**

Punjabi is rather unique for an Indo-European language in that tones are a prominent feature of speech. As such, the IPA conversion is not accurate for Punjabi. Fortunately, there is a direct correlation between certain aspirated consonants and use of subscript /ha/ to represent different tones.

#### Voiced aspirates

The consonants that are employed for voiced aspirates in other Indian languages are not prounced as such in Punjabi. In Punjabi these consonants are used to mark changes in tone. The table below indicates how each consonant is pronounced based on its position within a word.

Consonant	Beginning of word	All other positions
પ્પ	ਕ	ਗ
	[k]	[g]
ਝ	ਚ	ਜ
	[ʧ]	[¢3]
ਢ	ਟ	ਡ
	[t]	[d]
य	ਤ	ਦ
	[ <u>t</u> ]	[d̪]
ਭ	ਪ	ਬ
	[p]	[b]

At the beginning or middle of a word, a voiced aspirate indicates a low tone on the following vowel. Examples:

- ਘੋੜਾ [g<sup>h</sup>oː[aː] is actually pronounced [kòː[aː]
- থম্মাবন্স [pəgʰaːrnaː] is actally pronounced [pəgàːrnaː]
- भण्णरु [məgʰaːŋaː] is actually pronounced [məgàːŋaː]

At the end of the word (stem-final), the voiced aspirates indicates a high tone on the preceding vowel. Examples:

• ਕੁਝ [kud3<sup>h</sup>] is actually pronounced [kúd3]

#### Ha

At the beginning of a word, J indicates [ha].

In the middle or at the end of a word, ha indicates a high tone on the preceding vowel. Examples:

• ਚਾਹ [ʧaːh] is actually pronounced [ʧáː]

Subscript ha also indicates a high tone on the preceding vowel. Examples:

• ਪੜ੍ਹ [pə[<sup>h</sup>] is actually pronounced [pə́[]

The following conventions apply apart from at the beginning of a word:

- ਹਿ converts into a high tone (e.g. ਸਹਿਤ is pronounced ਸੇਤ [séːt̪]).
- \_'ਹ converts into a high tone (e.g. ਸੁਹਣਾ is pronounced ਸੋਣਾ [soí:naː]).
- 'J converts into a high tone (e.g. मৃয়বি is pronounced मै़व [cár]).
- 'ਹੁ converts into a high tone (e.g. ਬਹੁਤ is pronounced ਬੌਤ [bɔ́t̪]).

References

- Teach Yourself Panjabi ISBN 1-07143161-6 (p16, 19-21)
- [21]
- [22]
- [23]

### Nasalisation

ISO 15919	IPA	Devanagari	Bengali	Gurmukhi	Gujarati	Oriya	Tamil	Telugu	Kannada	Malayalam	Sinhala
ṁ[24]	?		ৎ	•	0	0	0	0	0	o[25]	o
m[24]	?	-	-	0	-	-	-	-	-	-	-
mँ[26]	?	*	٠	U	0	U	-	-	-	-	-
ň	?	-	-	-	-	-	-	с	-	-	-

- ^ The signs m and m are essentially identical. However, Gurmukhi has two separate nasal characters and if this distinction is to be retained separate identifiers must be used.
- ^ For Malayalam, it is transliterated as 'm' at the end of a word. There is no actual phonemic nasalisation in Malayalam. This symbol only indicates nasalisation when Malayalam script is being used to write Sanskrit. Otherwise, it represents either consonantal /m/ (without the inherent vowel) or consonantal /ŋ/ (without the inherent vowel), mostly in borrowed Sanskrit words that originally had nasalisation. Some of these borrowed words are pronounced with /m/ and others with /ŋ/, and, because of analogy, this symbol has come to represent these phonemes (when the vowels are suppressed otherwise the normal letters would be used) in native words as well.
- ^ When applied to a semivowel (y, r, l, l or v), in contrast to its application to a vowel, candrabindu is placed before the semivowel. For example, सर्ययन्ता is written sa:myyantā and not saymyyantā.

The standard nasal signs (m and m) are only to be used at the end of words OR when it is crucial to keep the distinction between Bindi and Tippi use in Gurmukhi. Otherwise, the following rules should be enforced:

When followed by	ISO 15919	IPA
k, kh, g, gh or ṅ q, <u>kh</u> , or ġ	ń	ŋ
c, ch, j, jh or ñ z	ñ	ŋ
ț, țh, ḍ, ḍh, or ṇ	ņ	η
t, th, d dh, or n	n	n
p, ph, b bh, or m f	m	m
y, r, l, v, ś, ş, s, h ý	n	n

#### References

- Transliteration of Non-Roman Scripts <sup>[27]</sup>
- Transliteration of Indic scripts: How to use ISO 15919 <sup>[28]</sup>

Script specific resources

- The Sindhi Alphabet <sup>[29]</sup>
- The Western Punjabi Alphabet <sup>[30]</sup>
- Sinhala to International Phonetic Alphabet Transliteration Scheme<sup>[31]</sup>
- Free Online Indic Transliteration in all Indian Languages and to image conversion <sup>[32]</sup> Bengali Hindi Kannada
   Malayalam Oriya Punjabi Tamil Gujarati Punjabi/Gurumukhi & Telugu

### References

- [1] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-gur-vasp
- [2] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-n
- [3] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-n2
- [4] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-sin-tamilchar
- [5] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-r
- [6] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-ben-r
- [7] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-r3
- $[8] \ http://en.wikipedia.org/wiki/Wikipedia:Indic_transliteration\#endnote\_consonant-v$
- [9] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_consonant-ben-v
- $[10] \ http://en.wikipedia.org/wiki/Wikipedia:Indic_transliteration#endnote_tamil-shappa.org/wiki/Wikipedia:Indic_tamil-shappa.org/wiki/Wikipedia:Indic_tamil-shappa.org/wikipedia:Indic_tamil-shappa.org/wikipedia:Indic_tamil-shappa.org/wikipedia:Indic_tamil-shappa.org/wikipedia:Indic_tamil-shappa.org/wikiped$
- $[11] \ http://en.wikipedia.org/wiki/Wikipedia:Indic_transliteration {\consonant-gur-harmonic} and the second sec$
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- [22] http://books.google.com/books?vid=ISBN0415183448&id=DGQoeGxtjKsC&pg=PA68&lpg=PA68&dq=Panjabi+tones& sig=rWMja6QjjmmOKSJnlXoRbWSyKKA

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- [26] http://en.wikipedia.org/wiki/Wikipedia:Indic\_transliteration#endnote\_nasal-candrabindu
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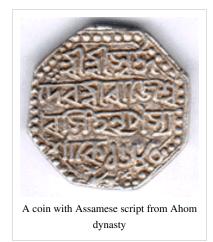
## Assamese alphabet



The Assamese script (অসমীয়া লপি  $\hat{O}x\hat{o}miya\ Lipi$ )<sup>[1]</sup> is a writing system of the Assamese language. A variant of the Eastern Nagari alphabet it used to be the script of choice in the Brahmaputra valley for Sanskrit as well as other languages such as Bodo (now Devanagari), Khasi (now Roman), Mising (now Roman) etc. The current form of the script has seen continuous development from the 5th-century Umachal/Nagajari-kanikargaon rock inscriptions written in an eastern variety of the Gupta script, adopting significant traits from the Siddham Script along the way. By the 17th century three styles of Assamese script could be identified (*baminiya, kaitheli* and *garhgaya*) that converged to the standard script following typesetting required for printing. The present standard is identical to the Bengali script *except for three letters*.<sup>[2]</sup>

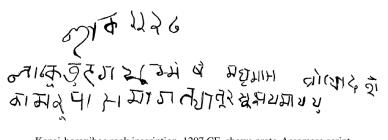
Buranjis were written during Ahom dynasties in Assamese language using Assamese script. The earliest evidence of Assamese script is found in the Charyapada, the Buddhist songs. They are supposed to have been composed within a time-frame of four hundred years from 8th century AD to 12th century AD. In the 14th century Madhava Kandali used Assamese script to compose the famous Kotha Ramayana which is the first translation of Ramayana in a regional Indian language after Valmiki Ramayana in Sanskrit. Later, Srimanta Sankardeva used it in the 15th and 16th centuries to compose his oeuvre in Assamese and Brajavali the language of the Bhakti poems (Borgeets) and Dramas (Ankiya naat).

Ahom king Chakradwaj Singha, (1663–1670 AD) was the first ruler who started issuing Assamese coins for his kingdom (see figure for a sample coin). Similar script with minor differences are used to write Maithili, Bengali, Manipuri and Sylheti language.



#### History

The Umachal rock inscription of the 5th century evidences the first use of a script in the region. The script was very similar to the one used in Samudragupta's Allahabad Pillar inscription. Rock and copper plate inscriptions from then onwards, and *Xaansi* bark manuscripts right up to the 18th–19th centuries show a steady



Kanai-boroxiboa rock inscription, 1207 CE, shows proto-Assamese script.

development of the Assamese script. The script could be said to develop proto-Assamese shapes by the 13th century. In the 18th and 19th century, the Assamese script could be divided into three varieties: *Kaitheli* (also called *Lakhari* in Kamrup region, used by non-Brahmins), *Bamuniya* (used by Brahmins, for Sanskrit) and *Garhgaya* (used by state officials of the Ahom kingdom)—among which the *Kaitheli* style was the most popular, with medieval books (like the *Hastir-vidyrnava*) and sattras using this style. In the early part of the 19th century, Atmaram Sarmah designed the first Assamese script for printing in Srerampore, and the Bengali and Assamese lithography converged to the present standard that is used today.

#### Assamese symbols

#### Vowels

The script presently has a total of 11 vowel letters, used to represent the eight main vowel sounds of Assamese, along with a number of vowel diphthongs. All of these are used in both Assamese and Bengali, the two main languages using the script. Some of the vowel letters have different sounds depending on the word, and a number of vowel distinctions preserved in the writing system are not pronounced as such in modern spoken Assamese or Bengali. For example, the Assamese script has two symbols for the vowel sound [i] and two symbols for the vowel sound [u]. This redundancy stems from the time when this script was used to write Sanskrit, a language that had a short [i] and a long [i:], and a short [u] and a long [u:]. These letters are preserved in the Assamese script with their traditional names of  $h\hat{o}rsw\hat{o} i$  (lit. 'short i') and  $dirgh\hat{o} i$  (lit. 'long i'), etc., despite the fact that they are no longer pronounced differently in ordinary speech.

Letter	Name of letter	Vowel sign with [kɔ] ( <b></b> の)	Name of vowel sign	Transliteration	IPA
অ	ô	ক (none)	(none)	kô	ko
অ <sub>or</sub> অ'	0	<b>Φ</b> (none) or <b>Φ</b> '	(none)	ko	ko
আ	a	কা	akar	ka	ka
ই	hôrswô i	ক	hôrswôikar	ki	ki
ঈ	dirghô i	কী	dirghôikar	ki	ki
উ	hôrswô u	কু	hôrswôukar	ku	ku
উ	dirghô u	কূ	dirghôukar	ku	ku
শ্বা	ri	কৃ	rikar	kri	kri
ଘ	e	ক	ekar	kê and ke	ke and ke
ঐ	ôi	ক	ôikar	kôi	koj
છ	û	ক।	ûkar	kû	kʊ
જ	ôu	কট	ôukar	kôu	kow

Vowel signs can be used in conjunction with consonants to modify the pronunciation of the consonant (here exemplified by  $\overline{\mathbf{v}}$ ,  $\hat{k}$ ). When no vowel is written, the vowel ' $\overline{\mathbf{v}}$ ' ( $\hat{o}$  or o) is often assumed. To specifically denote the absence of a vowel, () may be written underneath the consonant...

#### + Vowels

#### Consonants

The names of the consonant letters in Assamese are typically just the consonant's main pronunciation plus the inherent vowel  $\hat{o}$ . Since the inherent vowel is assumed and not written, most letters' names look identical to the letter itself (e.g. the name of the letter  $\mathbf{v}$  is itself  $\Xi$  ghô). Some letters that have lost their distinctive pronunciation in Modern Assamese are called by a more elaborate name. For example, since the consonant phoneme /n/ can be written  $\overline{\mathbf{n}}$ ,  $\mathbf{n}$ , or  $\mathfrak{B}$  (depending on the spelling of the particular word), these letters are not simply called  $n\hat{o}$ ; instead, they are called न dôntiyô nô ("dental n"), ¶ mudhôinnô nô ("cerebral n"), and an niô. Similarly, the phoneme /x/ can be written as m talôibbô xô ("palatal x"), a mudhôinnô xô ("cerebral x"), or त्र dôntiyô xô ("dental x"), the phoneme /s/ can be written using **▷** *prôthôm sô* ("first s") or  $\mathbf{k}$  ditiyô sô ("second s"), and the phoneme /z/



can be written using  $\mathfrak{F}$  bôrgiyô zô ("row z" = "the z included in the five rows of stop consonants") or  $\mathfrak{T}$  ôntôsthô zô ("z situated between" = "the z that comes between the five rows of stop consonants and the row of sibilants"), depending on the standard spelling of the particular word.

## Consonants

Letter	Name of Letter	Transliteration	IPA
ক	kô	k	k
খ	khô	kh	k <sup>h</sup>
গ	gô	g	g
ঘ	ghô	gh	g'n
ঙ	ngô	ng	ŋ
চ	prôthôm sô	S	s
ছ	ditiyô sô	sh	sh
জ	bôrgiyô zô	Z	z
ঝ	jhô	zh	zh
යා	niô	У	j
ট	murdhônyô tô	t	t
ঠ	murdhônyô thô	th	t <sup>h</sup>
ড	murdhônyô dô	d	d
ত	murdhônyô dhô	dh	dĥ
ণ	murdhônyô nô	n	n
ত	dôntyô tô	t	t
থ	dôntyô thô	th	t <sup>h</sup>
দ	dôntyô dô	d	d
ধ	dôntyô dhô	dh	d <sup>h</sup>
ন	dôntyô nô	n	n
প	pô	р	р
ফ	phô	ph	p <sup>h</sup>
ব	bô	b	b
ভ	bhô	bh	b <sup>h</sup>
ম	mô	m	m
য	ôntôsthô zô	Z	Z
ৰ	rô	r	r
ল	lô	1	1
ৱ	wô	w	w
শ	talôibbô xô	x and s	x~s

ষ	murdhônyô xô	x and s	X~S
স	dôntyô xô	x and s	x~s
হ	hô	h	h
ক্ষ	khyô	khy	k <sup>h</sup> j
ড.	dôre ŗô	ŗ	r
٥.	đhôre ŗô	ŗ	ſ
য.	ôntôsthô yô	у	j

#### **Consonants clusters**

According to Dr. G. C. Goswami the number of two-phoneme clusters is 143 symbolised by 174 conjunct letters. Three phoneme clusters are 21 in number, which are written by 27 conjunct clusters. A few of them are given hereafter as examples:

Conjunct letters	Conjunct letters (Latin interpretation)	[Phoneme clusters (with phonetics)
ক + ক	(ka+ka)	<b>क्</b> क kka
ঙ + ক	(na+ka)	ঙ্ক ńka
ল + ক	(la+ka)	ल्क lka
স + ক	(şa+ka)	স্ক şka
স + ফ	(sa+pha)	স্ফ spha
ঙ + খ	(ña+kh)	ঙ্খ ñkha
স + খ	(sa+kh)	স্খ skha
ঙ + গ	(ńa+ga)	ঙ্গ ńga
ঙ + ঘ	(ń+gha)	ঙঘ ńgha
দ + ঘ	(da+gha)	দঘ dgha
শ + চ	(śa+ca)	শ্চ śca
<u></u> ष्ठ + ष्ट्	(ca+cha)	চ্ছ ccha
ঞ + ছ	(ña+cha)	ঞ্ছ ñcha
এঃ + জ	(ña+ja)	ঞ্জ ñja
জ + এঃ	(ja+ña)	জ্ঞ jña
ল + ট	(la+ţa)	न्छे lţa
ণ + ঠ	(ņ+tḥa)	٩ð ņtha
ষ + ঠ	(şa+tḥa)	ষ্ঠ ştha
ণ + ড	(ņa+ḍa)	শ্ড ņḍa
ষ + ণ	(şa+ņa)	ষ্ণ sņa
হ + ন	(ha+na)	र hna
ক + ষ	(ka+ņa)	ক্ষ kņa
প + ত	(pa+ta)	প্ <b>ত</b> pta
স + ত	(sa+ta)	স্ত sta
ক + ত	(ka+ta)	ক্ত kta

গ + ন	(ga+na)	घ्न gna
ম + ন	(ma+na)	ম্ন mna
শ + ন	(śa+na)	শ্ন śna
স + ন	(sa+na)	স্ন sna
হ + ন	(ha+na)	र hna
ত + থ	(ta+tha)	ত্থ ttha
ন + থ	(na+tha)	न्थ ntha
ষ + থ	(şa+tha)	ষ্থ stha
ন + দ	(na+da)	न्म nda
ব + দ	(ba+da)	ব্দ bda
ম + প	(ma+pa)	ম্প mpa
ल + প	(la+pa)	न्भ lpa
ষ + প	(şa+pa)	ষ্প spa
স + প	(sa+pa)	স্প spa
ম + ফ	(ma+pha)	ম্ফ mpha
ষ + ফ	(şa+pha)	<b>म्</b> य şpha
দ + ব	(da+ba)	দ্ব dba
ম + ব	(ma+ba)	ম্ব mba
হ + ব	ha+ba)	হ্ব hba
দ + ভ	(da+bha)	দ্ভ dbha
<u>भ</u> + छ	(ma+bha)	ম্ <b>ভ</b> mbha
ক + ম	(ka+ma)	ক্ম kma
দ + ম	(da+ma)	দ্ম dma
হ + ম	(ha+ma)	হ্ম hma
$\lambda + \lambda$	(ma+ma)	म्म mma

## Digits

Hindu-Arabic numerals	0	1	2	3	4	5	6	7	8	9
Assamese numerals	0	১	۲	৩	8	¢	৬	٩	ጉ	\$
Assamese names	xuinnô	ek	dui	tini	sari	pas	sôy	xat	ath	nô
	শূণ্য	এক	দুই	তনি	চাৰ	পাচ	ছয.	সাত	আঠ	ค

## |+ Digits

## Three distinct variations of Assamese script from the Bengali

Letter	Name of letter	Transliteration	IPA	Bengali
ৰ	rô	r	r	– bôesunnô rô
ৱ	wô	W	w	- (Absent)
ক্ষ	khyô	khy	k <sup>h</sup> j	– juktokkhyô

I+ Assamese unique characters Though क्ष is used in Bengali, it has a different pronunciation.

## Assamese keyboard layout

• In-script keyboard layout:

<b>.</b> ~		@ @ # 2 ২ 3	( · · · ·	% 393 5 & 6 も 7 9 8 b	( ( ) ) ) 9 & 0 ° - ° + =	Backspace
Tab	Q ঔ q ৌ	W ঐ E w ৈ e			ঘ গ O ধ P ঝ o দ p জ [ড	) अ ] ्र \ य
Caps	A ও a ো	S ଏ s (୦	D অ d ্ 1	ই ি G উ H ফ g ু h প j ৰ	K খ L থ : ছ k ক I ত ; চ	" ਠੇ ' ਹੋ Enter
Shift	ZZ z e	x ँ x ং	С с म		M *1 m 꺼 , , 기	? ? / য় Shift

• Phonetic keyboard layout:

~ 200c ` 200d	! !   1 5	@@ 2	## 30 48	<mark>%%</mark> ^ ଏ3 5 ୯ 6 ৬	δ. δ.         * *           7 9         8 b	) ( ( ) ) 9 & 0 (		Backspace
Tab c	২ ধ ম দ w		ঈ R ড় ী r ৰ	т ठे t ট у এ	Uউ।ই uু iি	О 🖑 Р о З Р	ফ প { ৈ [ co ] cot	॥ \
Caps	A অ a া	S ষ s স	D ঢ d ড f ত		ঃ J ঝ হ j জ		ः : : " " न	Enter
Shift	Z য z য়	X ঢ় x শ		ঋ B ভ আ b ব	N ণ n ন m ম	- <del>.</del> .	) > Ŏ . I / Q	Shift

#### • The unique alphabet identifiers:

The keyboard locations of three characters unique to the Assamese script are depicted below:

~ ,~	!         @         @         #         ्व         \$         ₹         ₹         1         1         2         २         3         ७         4         8	% उब         ^	전 8	+ % = Ç Backspace
	Q ঔ W ঐ E আ R ঈ q ৌ w ৈ e া r ै		I 되 O 박 P ঝ { ঢ i গ o দ p জ [ ড	
Caps	A ଓ S 식 D 팩 d Q	F ই G উ H ফ f ি g ু h প	JJK খ L থ : ছ jৰ k ক I ত ; চ	Enter
Shift	Z Z     X ँ     C ๆ       Z ९     X °     C म	VV Vन ba NN nन	M শ m স , , ) > ।	?? / य
& फ़्र 7 १	The letter "क" (khyô)	BB b ब	The letter "Z" (wô)	J J j ৰ

• ITRANS characterisation:

The "Indian languages TRANSliteration" (ITRANS) the ASCII transliteration scheme for Indic scripts here, Eastern Nagari – Assamese; the characterisations are given below:

Keyboard Sequence	Character
k	ক্
kh	খ্
g	গ্
gh	ঘ্
~N	ષ્
N^	ષ્
ch	চ্
Ch	ঙ
chh	ঙ
j	জ্
jh	ঝ্
~n	ಖ್
JN	ಖ್
Т	ট্
Th	ঠ্
D	ড্
Dh	ৃয
Ν	ণ্
t	ত্
th	থ্
d	দ্

Keyboard Sequence	Character
dh	ধ্
n	ন্
p	બ્
ph	ফ্
b	ব্
bh	ভ্
m	ম্
у	য্
r	ৰ্
1	न्
v	ৰ্
W	ৰ্
sh	শ্
Sh	ষ্
shh	ষ্

S	স্
h	হ
.D	ড্
.Dh	. ق
Y	য
yh	য

Keyboard Sequence	Character
GY	জ্ঞ্
dny	জ্ঞ্
X	ক্ষ্
a	অ
aa	আ
А	আ
i	JIN
ii	ঈ
Ι	ঈ
u	উ
uu	উ
U	উ
RRi	ঋ
R^i	ঋ
LLi	స

Keyboard Sequence	Character
L^i	స
e	۵
ai	න
0	હ
au	છે
RRI	ৠ
R^I	ৠ
LLI	ž
L^I	ž
.N	v
.n	ং
М	ৎ
Н	8
.h	

Keyboard Sequence	Character
0	0
1	2
2	ર
3	৩
4	8
5	¢
6	Ŀ
7	٩
8	म
9	\$
#	্ৰ
\$	ৰ্
^	ত্ৰ
*	শ্ৰ
	•

### Notes

- [1] The name ' first appears in Ahom coins and copperplates where the name denoted the Ahom script
- $\cite{2} http://rajivkonwar100.blogspot.com/2011/07/assamese-experts-question-sahitya-sabha.html \cite{2} http://rajivkonwar100.blogspot.com/2011/07/assamese-experts-question-sahitya-sabha.html \cite{2$

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## **External links**

- Assamese alphabet (http://www.assam.org/node/2330)
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# The Assam Tribune

Guwahati, Sunday, March 5, 2006 EDITORIAL

## The 'X' sound in Assamese language — Rajen Barua

A ssamese is the eastern-most member of New Indo Aryan (NIA) languages in India, and is spoken in the Brahmaputra valley in Asomm. It is also the easternmost member of the Indo-European group of languages which is the largest language group in the world with a total number of speakers of more than half of the world population. All the modern European languages as well as those of Iran, India and Pakistan fall into this Indo-European group. Amongst the NIA languages, Assamese bears some unique characteristics which are not found in other Indian languages.

Assamese is a very ancient language, a fact not very well recognized even by the Assamese. From that ancient past, the Assamese language evolved in partial isolation from mainland India, and developed some distinct characteristics. Being the farthest outpost of Aryan migration towards the east, Assamese falls in the outer belt or in the peripheral Indo-Aryan languages. As such Assamese has retained certain characteristics of the parent Indo-European (IE) languages which have been lost in other parts of India.

Besides the absence of the cerebrals, Assamese has the unique /x/ sound which is absent in Sanskrit and other NIA languages. This was duly observed by the Baptist Missionaries in the early nineteenth century when they encountered the language and has opined correctly that Assamese has the unique /x sound which is similar to the Greeks. Phonetically, this /x/ sound is pronounced somewhat in between the sounds /s/, /kh/ and /h/ and is similar to the German sound /ch/ as pronounced in the word 'Bach' or the Scottish sound as found in the word 'Loch'. Thus in Assamese, all the three Indo-Aryan Sibilants: s, s' and s'' are pronounced as /x/. This is a unique characteristic of the Assamese language. On this point, Dr. Suniti Kumar Chatterjee, the leading Indian philologist, remarked, "The change of initial, intervocal and final (sibilants) to the gluteral spirant x in Assamese is something remarkable and is paralleled by what we see in Singhalese and Kashmiri. This is also noticeable in Iranian, Hellenic and Celtic." In many languages this original Indo-European /x/ sound was lost which either evolved to s, kh or h. According to Kaliram Medhi, "The Assamese pronunciation of the sibilants is peculiar in Assamese, and evidently a relic of pre Vedic Aryan pronunciation." Dimbeswar Neog also agrees, "Next to the above peculiarities is the Asamiya X pronunciation of the sibilants which also must have been brought by the Early Aryans called the Mediterranean." Thus we see that this x sound in Assamese is not something which developed in Assam, nor it is a sound which was inherited from any of the non-Aryan languages in Asom, but it simply marks an earlier Indo-European pre Vedic heritage. The /x/ sound was there in the pre-Vedic Aryan language also before the evolution of the classical Sanskrit language. Dr Suniti Kumar Chatterjee, writes "It seems that in certain forms of OIA (Old Indo-Aryan languages the /x/ sound was the actually one employed for S as can be inferred from a medieval pronunciation of S as /kh/ being the nearest approximation to the traditional /x/". Dimbeswar Neog further writes, "When the Nordic of Vedic Aryan immigration into India took place in the second millennium B.C., the /x/ sound as in Asamiya was prominent. Chatterjee thinks that "tatax kim" was the actual pronunciation at the time of the Rig Veda. It came to be pronounced as "tatah kim" in later times owing to the loss of /x/ sound due to non-Aryan influence predominating over the Aryan. But it remained almost intact in the Dardic or Pisaci speech which like the Asamiya is a language of the outer band."

Scholars have now correctly identified this unique Assamese sound to be a 'veller fricative' sound. Dr. Banikanata Kakoty, states that in Assamese it is an 'unvoiced velar fricative' sound. Dr Golok Ch

Goswami describes it as a "velar voiceless aspirant'. The International Phonetic Association (IPA), has identified all the sounds of all the languages in the world and have assigned some unique symbols. The IPA symbol of the 'velar fricative' sound as found in Assamese and other languages is the Roman letter X. (See IPA Chart).

Some of the Indo-European languages have retained this sound although today in each language, the actual pronunciation is slightly different. In the European languages this sound is spelled either as x or ch. In the Greek language it is spelled as x as in the word Xarish (meaning favor). In the Russian language it is spelled as x as in the words Xrushchev or Chexov. In the German language it is spelled as ch as in the words Dach (meaning roof) or Bach (meaning brook). In Scottish language also this sound is there, and is spelled, like the Germans, as ch as in the word Loch (meaning hole).

Thus our Assamese language is a unique language which is one of the few which has still retained this X sound. It is believed that in Assam we have this sound from the early days of Narakaxura who belongs to an Axura tribe which is an earlier pre-Vedic Aryan group, the main branch of which immigrated to Persia and later established the worship of the supreme deity, Ahura Mezda as the formless God. It is interesting to note that even today Assamese culture has some striking correspondence with the old Persian culture as found in Zend-Avesta. The Persian language has also some correspondence with the Assamese language in many respects including the common /x/ sound.

From these ancient past, the Aryan roots of the Assamese language has greatly assimilated various other elements into its body in Assam, notably of Bodo group of the Tibeto-Burman family; and the old Assamese language evolved as the dialect of the of the common people. In course of time, several waves of Aryan immigrants entered Assam. According to one theory, these early immigrants were Alpine Aryans from the Mediterranean. "During the third millennium B.C.the Alpine immigration poured into India, one branch of them moving toward the western coast of India through the Indus valley and the other branch pushing towards Eastern India." They must have come through the foothills of the Himalayas bypassing the mainland India. Assamese language bears some interesting correspondence to some languages of the Himalayan foothills. It is also probable that some of them came through one of the northern trade routes thru Tibet and Bhutan, which were in common use in those times.

In keeping with the IPA (International Phonetic Association) this sound should be represented by the letter X. Assamese should start writing this sound in their many words which have this sound. Thus the correct spelling of the word Assam in Assamese should be OXOM. There has been some attempt to write the word with the spelling ASOM. Needless to say that the spelling ASOM does not represent the proper Assamese pronunciation.

# **Romanization of Telugu**

There are several systems for romanization of the Telugu script.

## Vowels

Independent	With Š(k)	ISO	IPA	Independent	With Š(k)	ISO	IPA
େ	ሄ(ka)	а	/a/	ಆ	కా(kā)	ā	/aː/
ຊ	පී(ki)	i	/i/	<del>.</del> Фя	ຮ <b>ໍ</b> (kī)	ī	/iː/
ę	ຮັງ(ku)	u	/u/	<del>ٿ</del>	కూ(kū)	ū	/uː/
ఋ	కృ(krౢ)	ŗ	/ru/	ಉಾ	కౄ( <i>k</i> ŗ)	ŗ	/ruː/
<i>N</i>		1		ഹ്മ		Ī	
ఎ	S(ke)	e	/e/	ລ	€(kē)	ē	/e:/
ສ	ຮີ(kai)	ai	/aj/	പ	కొ(ko)	0	/0/
ఓ	కో (kō)	ō	/oː/	ಕ್	కౌ(kau)	au	/aw/
ಅಂ	ຮັດ(kṁ)	ṁ		မား	కి:(kḥ)	ķ	

## Consonants

ISO	k	kh	g	gh	'n	c	ch	j	jh	ñ	ţ	ţh	ġ	<b>d</b> h	ņ	t	th	d	dh	n	ņ	p	ph	b	bh	m	у	r	ŗ	1	ļ	<u>l</u>	v	śş	s	h
IPA	k	k <sup>h</sup>	g	gĥ	ŋ	t∫	t∫ <sup>h</sup>	dЗ	d3 <sup>h</sup>	ŋ	t	ť	þ	ď	η	ţ	ť	ď	ď	n	ņ	p	$\boldsymbol{p}^{h}$	b	bĥ	m	j	L	r	1	ι	ł	υ	) ຊ	s	ĥ
Telugu	క	ఖ	К	ఘ	జ	చ	ఛ	జ	ఝ	ਕ	ట	Q	డ	Ģ	ອ	త	ф	ద	ф	న		ప	ఫ	బ	భ	మ	య	Q	ස	ల	ళ		వ	Å X	స	హ

### **Irregular Consonants**

Telugu	ISO 15919	ITRANS
కష్	kșa	kSa/kSha/xa
జష్	jña	GYa/j~na

Note:  $\forall \overline{\delta}(sra)$  and  $\underline{\check{o}}\overline{\delta}(tra)$  occurs by combining consonants in Telugu script unlike other Indic scripts.

## **Other diacritics**

- Virama (f mutes the vowel of a consonant, so that only the consonant is pronounced. Example:  $\mathfrak{S} + \xrightarrow{\mathsf{F}} \mathfrak{S}^{\mathsf{F}}$  or [ka]  $+ [\emptyset] \to [k]$ .
- Anusvara (0) nasalize the vowels or syllables to which they are attached. Example:  $\$ + 0 \rightarrow \$ 0$  or  $[ka] + [m] \rightarrow [kam]$
- Candrabindu (C) also nasalize the vowels or syllables to which they are attached. Example:  $S + C \rightarrow SC$  or  $[ka] + [n] \rightarrow [ka\check{n}]$ .
- Visarga (\$) adds a voiceless breath after the vowel or syllable it is attached to. Example: S + \$ → S \* or [ka] + [h]
   → [kah]

### UN romanization for geographical names

The United Nations romanization systems for geographical names (approved 1972, I1/11; amended in 1977 IH/12) was based on a report prepared by D. N. Sharma.<sup>[1]</sup>

The UN romanization uses macrons for long vowels ā ī ū, a dot under r for vocalic r, and caron on ĕ and ŏ.

ka kā ki kī ku kū kr kĕ ke kai kŏ ko kau

### ISO

There are differences between the UN system and the ISO transliteration standard ISO 15919: 2001<sup>[2]</sup>

## ITRANS

ITRANS also has transliteration for Telugu.<sup>[3]</sup>

## RTS

Used in Vemuri Rao's *English-Telugu Dictionary* (2002) Rice University's Reverse Transliteration System (RTS) (created by Ramarao Kanneganti and Ananda Kishore) can be used for the transliteration of Telugu into Roman script as an alternative to phonetic alphabet.<sup>[4]</sup>

- RTS represents short vowels by the lower case English character and long vowels by the corresponding upper case character. a A etc.
- Unaspirated consonant-vowel pairs are represented by a lower case letter followed by a suitable vowel.

The result is a phonetic representation only suitable for dictionaries. Examples:

- vaiDUryaM
- gOmEdhikaM

## References

- [1] Technical reference manual for the national standardization of ... 2007- Page 39 " ... Nations recommended system was approved in 1972 (II/ 11) and amended in 1977 (IH/12), based on a report prepared by D. N. Sharma. ... There is no evidence of the use of the system either in India or in international cartographic products. Telugu uses an alphasyllabic script whereby each character represents a syllable rather than one sound. Vowels and diphthongs are marked in two ways: as independent characters (used syllable-initially) and in an abbreviated form, ......
- [2] http://www.unicode.org/charts/PDF/U0C00.pdf
- [3] Information Systems for Indian Languages: International ... Page 131 Chandan Singh, Gurpreet Singh Lehal, Jyotsna Sengupta 2011 "Table 1. The Indian Language Transliteration (ITRANS) symbols of phonemes common to three languages Hindi, Tamil and Telugu Manual labeling of the recorded data has been carried out."
- [4] English-Telugu Dictionary Page li isbn 8120616367 Vemuri Rao 2002 "Transliteration of Telugu using RTS This dictionary uses RTS (Rice University's Reverse Transliteration System) for the transliteration of Telugu using Roman script. The RTS is defined below. (1) Represent short vowels by the lower case ..."

## **External links**

• Library of Congress Telugu romanization table (http://www.loc.gov/catdir/cpso/romanization/telugu.pdf)

# **Article Sources and Contributors**

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### Telugu

### Vowels and Diphthongs (see Note 1)

అ	а	と	1
ಆ	ā	ఎ	e
ସ	i	ప	ē
<del>. </del>	ī	ສ	ai
ය්	u	ఒ	0
the second se	ū	ఓ	ō
ఋ	ŗ	रु	au
ౠ	ŗ		

#### Consonants (see Note 2)

Gutturals		Palatals		Cerebrals	i	Dentals	
క	ko	చ		ట	to	త	to
ఖ	ka kha	- చ	ca ĉa	<u>ة</u>	ța țha	<b>ф</b>	ta tha
Х	ga	ఛ	cha	డ	ḍa	ద	da
ఘ	gha	జ	ja	<b>Ģ</b>	ḍha	ф	dha
ఙ	'na	ຳເນ	ĵa	အ	ņa	న	na
		ఝ	jha				
		<u>ଟ୍</u>	ña				

Labials		Semivow	els	Sibilants		Aspira	ate
ప	ра	య	уа	રું	śa	హ	ha
ఫ	pha	ŏ	ra	ష	șa		
బ	ba	ස	ra	స	sa		
భ	bha	ಲ	la				
మ	ma	ళ	ļa				
		వ	va				
<i>Sunna</i> (se	e Note 3)		Visarga			Ardhasunna	(see Note 4)
0	'n		8	ķ		د, ٽ	m

#### Notes

- Only the vowel forms that appear at the beginning of a syllable are listed; the forms used for vowels following a consonant can be found in grammars; no distinction between the two is made in transliteration.
- 2. The vowel *a* is implicit after all consonants and consonant clusters and is supplied in transliteration, with the following exceptions:
  - a) when another vowel is indicated by its appropriate sign; and
  - b) when the absence of any vowel is indicated by the superscript sign ( <sup>≞</sup> ) called *valapalagilaka*.
- 3. Exception: *Sunna* is transliterated by:
  - a) *i* before gutturals,
  - b) *ñ* before palatals,
  - c) *n* before cerebrals,
  - d) *n* before dentals, and
  - e) *m* before labials.
- Ardhasunna before gutturals and palatal, cerebral, and dental occlusives is transliterated n. Before labials, sibilants, semivowels, the aspirate, vowels, and in final position it is transliterated n.

#### Tamil

Vowels and Diphthon	<b>gs</b> (see Note 1)		
೨	а	ត	e
ஆ	ā	ஏ	ē
<b>2</b>	i	ස	ai
- <b>1</b> -1	ī	ભુ	0
ഉ	u	ę	ō
ஊ	ū	ஒள	au
Consonants (see Not	e 2)		
o oo	<u>k</u> a	ш	ma
க	ka	ш	уа
ங	'na	ர	ra (see Note 3)
ቻ	са	ຎ	la
ஞ	ña	ഖ	va
L	ţa	មិ	<u>l</u> a
ண	ņa	ள	ļa
த	ta	ற	<u>r</u> a
ந	na	ன	<u>n</u> a
Ц	ра		
Sanskrit Sounds			
ജ	ја	ஸ	sa
ហ	śa	ഈ	ha
ஷ	şa		

#### Notes

- 1. Only the vowel forms that appear at the beginning of a syllable are listed; the forms used for vowels following a consonant can be found in grammars; no distinction between the two is made in transliteration.
- 2. The vowel *a* is implicit after all consonants and consonant clusters and is supplied in transliteration, with the following exceptions:
  - a) when another vowel is indicated by its appropriate sign; and
  - b) when the absence of any vowel is indicated by the superscript dot ( ° ) called *pulli*.
- 3. This letter has the same form as the vowel sign for  $\bar{a}$  appearing after a consonant. Where ambiguity arises, it is written #.

# Tamil script

Tamil தமிழ்								
விக்கிப்பீடியா								
Туре	Abugida							
Languages	Tamil Sanskrit Saurashtra							
Parent systems	Brāhmī • Southern Brahmi • Tamil							
Sister systems	Malayalam Tulu script Grantha Vatteluttu							
ISO 15924	Taml, 346							
Direction	Left-to-right							
Unicode alias	Tamil							
Unicode range	U+0B80–U+0BFF <sup>[1]</sup>							

The **Tamil script** (தமிழ் அரிச்சுவடிி *tamil ariccuvați*) is an abugida script that is used by the Tamil people in India, Sri Lanka and elsewhere, to write the Tamil language, as well as to write the liturgical language Sanskrit, using consonants and diacritics not represented in the basic script.<sup>[2]</sup>Certain minority languages such as Saurashtra, Badaga, Irula, and Paniya are also written in the Tamil script.

## Overview

#### Characteristics

The Tamil script has 12 vowels (உபர்ஹுத்து *uyireluttu* "soul-letters"), 18 consonants (மயெய்ஹெத்து *meyyeluttu* "body-letters") and one character, the *āytam* ் (ஆய்தம்), which is classified in Tamil grammar as being neither a consonant nor a vowel (அலியஹெத்து *aliyeluttu* "the hermaphrodite letter"), though often considered as part of the vowel set (உயிரஹெத்துக்கள் *uyireluttukkal* "vowel class"). The script, however, is syllabic and not alphabetic.<sup>[3]</sup> The complete script, therefore, consists of the thirty-one letters in their independent form, and an additional 216 combinant letters representing a total 247 combinations (உயிர்மயெயஹெத்து *uyirmeyyeluttu*) of a consonant and a vowel, a mute consonant, or a vowel alone. These combinant letters are formed by adding a vowel marker to the consonant. Some vowels require the basic shape of the consonant to be altered in a way that is specific to that vowel. Others are written by adding a vowel-specific suffix to the consonant, yet others a prefix, and finally some vowels require adding both a prefix and a suffix to the consonant. In every case the vowel marker is different from the standalone character for the vowel. The Tamil script is written from left to right.

#### History

The Tamil script, like the other Indic scripts, is thought to have evolved from the Brahmi script. The script used by these inscriptions is commonly known as the Tamili script, and differs in many ways from standard Asokan Brahmi. For example, early Tamil Brahmi, unlike Asokan Brahmi, had a system to distinguish between pure consonants (m in this example) and consonants with an inherent vowel (ma in this example). In addition, according to Iravatham Mahadevan, early Tamil Brahmi used slightly different vowel markers, had extra characters to represent letters not found in Sanskrit, and omitted letters for sounds not present in Tamil, such as voiced consonants and aspirates. Inscriptions from the second century AD use a later form of the Tamil script, which is substantially similar to the writing system described in the Tolkappiyam, an ancient Tamil grammar. Most notably, they use the *pulli* to suppress the inherent vowel. The Tamil letters thereafter evolved towards a more rounded form, and by the fifth or sixth century AD had reached a form called the early vatteluttu.

			<b>165 QUAT</b>			ស ៤ ស្វេ ទាមទទួ		ிழாக	ഖണ്ട്	ාදී ඉ	£ிதம்	
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0	0	3	3	S	5	5	S	5	3	3	$\gamma$	Þ
3	Ö	$\mathfrak{S}$	Ś	ጉ	D	1	<u>~</u>	m	2	ๆ	ആ	бŢ
Diverg	viverging evolution of Tamil Brahmi script into Vatteluttu and Tami scripts											

HISTORY	<b>OF</b>	TAMIL SCRIPT
pringroom aāiīuūeēaio	ō நூற்குண்டு	K'nCĥţņtnpmyrlvlļŗn
Century அஆது ஈஉஊஎஏஐஒ	🔉 Century	க் ங் ச்ஞ்ட் ண்த் ந் ப் ம் ய் ர் ல் வ் ழ் ள் ற் ன்
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AD3 <sup>™</sup> C 另分:・+ L L D D 1 AD4 <sup>™</sup> C >> → : + L L D D 1 AD5 <sup>™</sup> C H 2		1 4 J J L U G I 4 5 J
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AD8"C >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>		123369870001034779
AD 10 <sup>®</sup> C 뇌 및 영 구 2 & 7 7 2 9 AD 11 <sup>®</sup> C 뇌 권 영 옷 2 & 7 7 2 9	2 AD11"C	72333297830027024739
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History of Tamil script



The modern Tamil script does not, however, descend from this script. In 7th century, the Pallava dynasty created a new script for Tamil, which was formed by simplifying the Grantha script (which in turn derived from Southern Brahmi), and adding to it the vatteluttu letters for sounds not found in Sanskrit. By the 8th century, this new script supplanted vatteluttu in the Chola and Pallava kingdoms which lay in the north portion of the Tamil-speaking region. Vatteluttu continued to be used in the southern portion of the Tamil-speaking region, in the Chera and Pandyan kingdoms until the 11th century, when the Pandyan kingdom was conquered by the Cholas.



Tampiran Vanakkam (Doctrina Christum) was the first book in Tamil, printed on 20 October 1578

Over the next few centuries, the Chola-Pallava script evolved into the modern Tamil script. The use of palm leaves as the primary medium for writing led to changes in the script. The scribe had to be careful not to pierce the leaves with the stylus while writing, because a leaf with a hole was more likely to tear and decay faster. As a result, the use of the *pulli* to distinguish pure consonants became rare, with pure consonants usually being written as if the inherent vowel were present. Similarly, the vowel marker for the *kurriyal ukaram*, a half-rounded *u* which occurs at the end of some words and in the medial position in certain compound words, also fell out of use and was replaced by the marker for the simple *u*. The *pulli* did not fully reappear until the introduction of printing, but the marker *kurriyal ukaram* never came back into use, although the sound itself still exists and plays an important role in Tamil prosody.



The forms of some of the letters were simplified in the nineteenth century to make the

script easier to typeset. In the twentieth century, the script was simplified even further in a series of reforms, which regularised the vowel markers used with consonants by eliminating special markers and most irregular forms.

#### **Relationship with other Indic scripts**

The Tamil script differs from other Brahmi-derived scripts in a number of ways. Unlike every other Indic script, it uses the same character to represent both an unvoiced plosive and its voiced equivalent. Thus the character  $\dot{s}$  *k*, for example, represents both [k], and [g]. This is because Tamil grammar treats only unvoiced stops as being "true" consonants, treating voiced and aspirated sounds as euphonic variants of unvoiced sounds. Traditional Tamil grammars contain detailed rules, observed in formal speech, for when a stop is to be pronounced with and without voice. These rules are not followed in colloquial or dialectal speech, where voiced and unvoiced versions of a stop are, in effect, allophones, being used in specific phonetic contexts, without serving to distinguish words.



Also unlike other Indic scripts, the Tamil script rarely uses special consonantal ligatures to represent conjunct consonants, which are far less frequent in Tamil than in other Indian languages. Conjunct consonants, where they occur are written by writing the character for the first consonant, adding the *pulli* to suppress its inherent vowel, and then writing the character for the second consonant. There are a few exceptions, namely  $\dot{s} \otimes ksa$  and  $\dot{s} \sigma \tilde{s}$ .

## **Tamil letters**

#### **Basic consonants**

Consonants are called the 'body' (*mei*) letters. The consonants are classified into three categories: *vallinam* (hard consonants), *mellinam* (soft consonants, including all nasals), and *idayinam* (medium consonants).

There are some lexical rules for formation of words. *Tolkāppiyam* describes such rules. Some examples: a word cannot end in certain consonants, and cannot begin with some consonants including 'r' 'l' and 'll'; there are two consonants for the dental 'n' - which one should be used depends on whether the 'n' occurs at the start of the word and on the letters around it. (Historically, one 'n' was pronounced alveolarly, as is still true in Malayalam.)

The order of the alphabet (strictly abugida) in Tamil closely matches that of the nearby languages both in location and linguistics, reflecting the common origin of their scripts from Brahmi.

Consonant	ISO 15919	Category	IPA
க்	k	vallinam	[k], [g], [x], [γ], [h]
ங்	ń	mellinam	[ŋ]
ச்	с	vallinam	[t͡]], [d͡ʒ], [ʃ], [s], [ʒ]
ஞ்	ñ	mellinam	[ɲ]
Ŀ	ţ	vallinam	[[], [d], [[]
ண்	ņ	mellinam	[ŋ]
த்	t	vallinam	[t̪], [d̪], [ð]
ந்	n	mellinam	[n]
ப்	р	vallinam	[p], [b], [β]
ம்	m	mellinam	[m]
ய்	У	idaiyinam	[j]
ர்	r	idaiyinam	[1]
ல்	1	idaiyinam	[1]
ഖ്	v	idaiyinam	[υ]
ழ்	1	idaiyinam	[4]
ள்	1	idaiyinam	[]
ற்	r	vallinam	[r], [t], [d]
ன்	ņ	mellinam	[n]

#### **Consonants of Modern Tamil**

The Tamil speech has incorporated many phonemes which were not part of Tholkappiyan classification. These characters called "grantha" are part of modern Tamil. They are taught from elementary school and incorporated in Tamil Nadu Government encoding called TACE 16 (Tamil All Character Encoding).

Consonant	ISO 15919	IPA
ஶ்	Ś	[۵], [Ĵ]
જું	j	[d͡3]
્યું	Ş	[ʂ]
ஸ்	S	[s]
ஹ்	h	[h]
க்ஷ்	kş	[k <b>ş</b> ]

The letter பர் is used only for words borrowed from Sanskrit (e.g. பாரதா śāradā), but is included in Unicode for rendering the common ligature 'Sri' (ஸ்ரீ Śrī), which is made up of பர்ரீ. க்ஷ் is technically a ligature of க்ஷ். In recent times, three combinations of Tamil basic letters are generally used to depict sounds of English letters 'f', 'z', and 'x'. This is for writing English and Arabic names and words in Tamil. The combinations are ஃப for f, ஃஜ for z and ஃஸ் for x. For example: asif = அசிஃப், aZaarudheen = அஃஜாருதீன், rex = ரலெஸ்.

#### Vowels

Vowels are also called the 'life' (*uyir*) or 'soul' letters. Together with the consonants (which are called 'body' letters), they form compound, syllabic (abugida) letters that are called 'living' letters (*uyirmei*, i.e. letters that have both 'body' and 'soul').

Tamil vowels are divided into short and long (five of each type) and two diphthongs.

#### **Isolated form**

Vowel	ISO 15919	IPA
அ	а	[^]
್ರ	ā	[ɑː]
Q	i	[i]
ग	ī	[iː]
ഉ	u	[u], [W]
୭ଣା	ū	[uː]

Vowel	ISO 15919	IPA
ഒ	e	[e]
ত	ē	[eː]
ස	ai	[^j]
ଡ଼	0	[0]
୍ଚ	ō	[oː]
ஒள	au	[ND]

#### **Compound form**

Using the consonant 'k' as an example:

Formation	Compound form	ISO 15919	IPA
க் + அ	க	ka	[kʌ]
க் + ஆ	கா	kā	[kɑː]
க் + இ	കി	ki	[ki]
ऊं + ल	க°	kī	[kiː]
க்+உ	ም	ku	[ku], [kW]
க் + ஊ	සෙ	kū	[kuː]
க் + எ	கசெ	ke	[ke]
க் + ஏ	கே	kē	[keː]
க் + ஐ	கலை	kai	[kʌj]
க் + ஒ	களெ	ko	[ko]
க் + ஓ	களே	kō	[koː]
க் + ஒள	களெ	kau	[kʌʊ]

The special letter  $\circ\circ$  (called *akh*) is the *visarga*. It traditionally served a purely grammatical function, but in modern times it has come to be used as a diacritic to represent foreign sounds. For example,  $\circ\circ\sqcup$  is used for the English sound *f*, not found in Tamil.

The long (*nedil*) vowels are about twice as long as the short (*kuRil*) vowels. The diphthongs are usually pronounced about one and a half times as long as the short vowels, though some grammatical texts place them with the long (*nedil*) vowels.

As can be seen in the compound form, the vowel sign can be added to the right, left or both sides of the consonants. It can also form a ligature. These rules are evolving and older use has more ligatures than modern use. What you actually see on this page depends on your font selection; for example, Code2000 will show more ligatures than Latha.

There are proponents of script reform who want to eliminate all ligatures and let all vowel signs appear on the right side.

Unicode encodes the character in logical order (always the consonant first), whereas legacy 8-bit encodings (such as TSCII) prefer the written order. This makes it necessary to reorder when converting from one encoding to another; it is not sufficient simply to map one set of codepoints to the other.

#### **Compound table of Tamil letters**

The following table lists vowel (*uyir* or life) letters across the top and consonant (*mei* or body) letters along the side, the combination of which gives all Tamil compound (uyirmei) letters.

。 。。	அ	್ರಾ	Q	ग	ഉ	<u>ഉണ</u>	ഒ	ত	æ	ଡ଼	୍ଚ	ଭୂଗ
க்	க	கா	கி	க°	ሞ	கூ	கெ	கே	கலை	களெ	களே	களெ
ங்	ங	ஙா	പി	ஙீ	ത്രം	ஙூ	ங	ங	പത	ஙரெ	ஙரே	ஙளெ
ਤਂ	ச	मा	சி	æ@	ዋወ	சூ	செ	ъC	ക്ക	சரெ	சரே	சளெ
ஞ்	୍	ஞா	ஞி	ଙ୍	ு	ക്ര	ଜ୍ଜ	ஞ	ஞ	ஞரை	ஞளே	ஞளெ
Ŀ	L	டா	∟ി	L°	∟	டூ	டெ	LC	டன	டரெ	டரே	டளெ
ண்	ண	ணா	ണി	ഞ്	ഞ്ഞ	ணூ	ഞ്ഞ	ணே	ഞ്ഞ	ணரெ	ணோ	ணளெ
த்	த	தா	தி	தீ	ም	தூ	தெ	தே	தன	தரெ	தரே	தளெ
ந்	ந	நா	நி	நீ	நு	நூ	நெ	நே	ந	நரெ	நரே	நளெ
ப்	Ц	பா	uЛ	ц°	பு	பி	பெ	цС	പത	பரை	பரே	பளெ
ம்	ம	மா	ഥി	ഥ°	ഗ്രം	வே	மெ	மே	மல	மரெ	மரே	மளெ
ய்	ш	யா	ചി	ш°	யு	சு	யெ	யே	யலை	யரெ	யரே	யளெ
ΰ	σ	лц	π٦	џ°	ரு	ரூ	ரசெ	ŗС	ரன	ரளெ	ரளே	ரளெ
ல்	ຎ	லா	രി	ര്	൞	ഔ	හබ	හරි	രു	லரெ	லரே	லளெ
ഖ	ഖ	வா	ഖി	ഖ°	ഔ	ഖ9	ഖറെ	ഖ	ഖത	வரெ	வளே	ର୍ଘାଙ୍ଗ
ţį	ĥ	ழா	ழி	ĥ	ም	ழூ	ழெ	ழே	ழன	ழரை	ழரே	ழளெ
ள்	ണ	ளா	ണി	ണ്	ണ്	ள9	ଗାରି	ளசே	ണഞ	ளரெ	ளளே	ଗ୍ମଗ୍ରେ
ற்	р	றா	ഇി	றீ	ም	றூ	றெ	ற	றன	றரெ	றரே	றளெ
ன்	ன	னா	ണി	ഞ°	൞	ன9	ଗ୍ଦର	කය	ഞ	னரெ	னோ	ଗ୍ଦା

## Grantha compound table

Vowels $\rightarrow$ Grantha consonants $\downarrow$	அ	್ರಾ	Q	۳ī	ഉ	ഉണ	െ	ত	æ	ଜୁ	ୢଡ଼	ஒள
ஶ்	ஶ	υσπ	സി	ீஸ	ሀው	ஸூ	யி	ய	யன	ஸரொ	ஶோ	யளெ
ģ	ß	ஜா	ജി	ജ	జ్రా	ജ	ജറ	ജ	ഇത	ஜரெ	ஜோ	ஜளெ
્યું	ବ୍ୟ	ஷா	കി	ഷ്	ഘ	ୠୢକ୍	ୠୣ୶ୖ	අය	ഷ്ടത	ஷரெ	ஷரே	ବ୍ୟର୍ଗି
ஸ்	സ	ஸா	സി	സ്	സ്	ஸூ	സെ	ஸே	സത	ஸரெ	ஸோ	ஸளெ
ஹ்	ഈ	ஹா	ഈി	ഈ	ഈ	ഈ9	ഐ	ஹே	ഇത	ஹொ	ஹோ	ஹளெ
க்ஷ்	க்ஷ	க்ஷா	க்ஷி	க் ஷீ	க்ஷு	க்ஷூ	க்ஷெ	க்ஷே	க்ஷன	க்ஷரெ	க்ஷரே	க்ஷளெ

### Numerals and symbols

Apart from the numerals (0-9), Tamil also has numerals for 10, 100 and 1000. Symbols for day, month, year, debit, credit, as above, rupee, numeral are present as well.

0	1	2	3	4	5	6	7	8	9	10	100	1000
0	க	ව	௩	ዋ	Ē	ሙ	ഒ	ଵ	கூ	Ū	m	சூ

day	month	year	debit	credit	as above	rupee	numeral
െ	மீ	௵	уı	ଗେଇ	ஷ	ᡗᡏ	छी

### **Tamil in Unicode**

The Unicode range for Tamil is U+0B80–U+0BFF. Grey areas indicate non-assigned code points. Most of the non-assigned codepoints are designated reserved because they are in the same relative position as characters assigned in other South Asian script blocks that correspond to phonemes that don't exist in the Tamil script.

Like other South Asian scripts in Unicode, the Tamil encoding was originally derived from the ISCII standard. Both ISCII and Unicode encode Tamil as an abugida. In an abugida, each basic character represents a consonant and default vowel. Consonants with a different vowel or bare consonants are represented by adding a modifier character to a base character. Each codepoint representing a similar phoneme is encoded in the same relative position in each South Asian script block in Unicode, including Tamil. Although Unicode represents Tamil as an abugida all the pure consonants (consonants with no associated vowel) and syllables in Tamil can be represented by combining multiple Unicode codepoints, as can be seen in the Unicode Tamil Syllabary below.

In Unicode 5.1, named sequences were added for all Tamil pure consonants and syllables. Unicode 5.1 also has a named sequence for the Tamil ligature SRI ( $\dot{srt}$ ),  $\dot{vv} \sigma^{\circ}$ . The name of this sequence is TAMIL SYLLABLE SHRII, and is composed of the Unicode sequence U+0BB6 U+0BCD U+0BB0 U+0BC0.

	Tamil <sup>[1]</sup> Unicode.org chart <sup>[1]</sup> (PDF)															
	0	1	2	3	4	5	6	7	8	9	A	В	C	D	E	F
U+0B8x			0	0 00		ক	ஆ	Q	ন্দ	ഉ	<u>୭</u> ଣା				ଗ	<u>ত্</u>
U+0B9x	ഇ		ଢ଼	ୢଡ଼	ஒள	க				ங	ச		ജ		ஞ	L
U+0BAx				ண	த				ந	ഞ	Ц				ம	ய
U+0BBx	Ţ	ற	ഖ	ണ	ழ	ഖ	ம	ବ୍ୟ	സ	ഈ					П	Ղ
U+0BCx	0	ס	-9				ଭ	G	ഞ		ொ	ோ	ளெ	•		
U+0BDx								ണ								
U+0BEx							0	க	೨	௩	ச	ſĿ	ሞ	ଗ	୬	கூ
U+0BFx	Ū	m	சூ	െ	மீ	ஸ	уı	ക	ஷ	ᠿ	ங்					

## Notes

1.^ As of Unicode version 6.3

Unicode Tamil Syllabary

Vowels →	அ	গ	Q	नन	ഉ	உள	െ	ন	ഩ	0	0	ஒள
Consonants	0B85	್ರಾ 0B86	0B87	0B88	<u>9</u> 0B89	0B8A	0B8E	ज 0B8F	뿂 0B90	ନ୍ତ 0B92	୍ବତ 0B93	0B94
+	0005	0000	0007	0000	0009	UDOA	UDOL	UDOF	0130	0132	01195	0074
			0	0				0		0	e	0
க்	க	கா	കി	கீ	ക് <u>സ</u>	கூ	கெ	கே	கன	களெ	களே	களெ
0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95
0BCD		OBBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ங்	Б	ஙா	പി	ஙீ	പ്രം	ஙூ	ங	ыС	പത	ஙரெ	ஙரே	ஙளெ
0B99	0B99	0B99	0B99	0B99	0B99	0B99	0B99	0B99	0B99	0B99	0B99	0B99
OBCD		OBBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ਲਂ	ዋ	சா	சி	°,	ሞ	சூ	செ	ъC	ക്ക	சரெ	சரே	சளெ
0B9A	0B9A	0B9A	0B9A	0B9A	0B9A	0B9A	0B9A	0B9A	0B9A	0B9A	0B9A	0B9A
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
୍ରେ	ଜ	ஞா	ങ്രി	ଙ୍	൭	ക്ര	ଜ୍ଜ	ஞே	ஞ	ஞரை	ஞோ	ஞளெ
0B9E	0B9E	0B9E	0B9E	0B9E	0B9E	0B9E	0B9E	0B9E	0B9E	0B9E	0B9E	0B9E
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
Ŀ	L	டா	∟า	L°	LP	டூ	டெ	LC	டன	டரெ	டரே	டளெ
0B9F	0B9F	0B9F	0B9F	0B9F	0B9F	0B9F	0B9F	0B9F	0B9F	0B9F	0B9F	0B9F
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ண்	ண	ணா	ണി	ഞ്	ഞ്ഞ	ணூ	ணெ	ணே	ண	ணரெ	ணோ	ணளெ
0BA3	0BA3	0BA3	0BA3	0BA3	0BA3	0BA3	0BA3	0BA3	0BA3	0BA3	0BA3	0BA3
OBCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
த்	த	தா	தி	தீ	து	தூ	தெ	தே	தன	தரெ	தரே	தளெ
0BA4	0BA4	0BA4	0BA4	0BA4	0BA4	0BA4	0BA4	0BA4	0BA4	0BA4	0BA4	0BA4
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ந்	ந	நா	நி	நீ	ሆ	நூ	ந	ந	ந	நரெ	நரே	நளெ
0BA8	0BA8	0BA8	0BA8	0BA8	0BA8	0BA8	0BA8	0BA8	0BA8	0BA8	0BA8	0BA8
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ப்	Ц	பா	പി	ц°	பு	பூ	பெ	பே	பல	பரை	பரே	பளெ
<b>OBAA</b>	0BAA	0BAA	0BAA	0BAA	0BAA	0BAA	0BAA	0BAA	0BAA	0BAA	0BAA	0BAA
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ம்	ம	மா	ഥി	மீ	ഥൗ	மூ	மெ	மே	மல	மரெ	மரே	மளெ
OBAE	0BAE	0BAE	0BAE	0BAE	0BAE	0BAE	0BAE	0BAE	0BAE	0BAE	0BAE	0BAE
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ய்	ш	шп	ധി	щ°	யுு	யூ	யெ	ய	ധത	யரெ	யரே	யளெ
<b>OBAF</b>	0BAF	0BAF	0BAF	0BAF	0BAF	0BAF	0BAF	0BAF	0BAF	0BAF	0BAF	0BAF
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
τ	Ţ	ரா	ரி	л°	ரு	ரூ	ரெ	ŋС	ரல	ரரெ	ரரே	ரளெ
<b>0BB0</b>	0BB0	0BB0	0BB0	0BB0	0BB0	0BB0	0BB0	0BB0	0BB0	0BB0	0BB0	0BB0
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ல்	ഖ	லா	രി	ര്	ഔ	හුව	හබ	හරි	രത	லரெ	லரே	லளெ
<b>0BB2</b>	0BB2	0BB2	0BB2	0BB2	0BB2	0BB2	0BB2	0BB2	0BB2	0BB2	0BB2	0BB2
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ഖ	ഖ	வா	ഖി	ഖ്	ഔ	ഖ9	ഖി	ഖ	ഖത	வரெ	வரே	ഖണെ
<b>0BB5</b>	0BB5	0BB5	0BB5	0BB5	0BB5	0BB5	0BB5	0BB5	0BB5	0BB5	0BB5	0BB5
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC

				9								
ų į	цр Цр	ழா	ழி	μ°	ழு	ழூ சி	ழெ	ழே	ழன	ழரை	ழரே	ழளெ
0BB4	0BB4	0BB4	0BB4	0BB4	0BB4	0BB4	0BB4	0BB4	0BB4	0BB4	0BB4	0BB4
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ள்	ள	ளா	ണി	ണ്	ണം	எ9	ளசெ	ளசே	ണഞ	ளரெ	ளரே	ளளெ
<b>0BB3</b>	0BB3	0BB3	0BB3	0BB3	0BB3	0BB3	0BB3	0BB3	0BB3	0BB3	0BB3	0BB3
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ற்	р	றா	ഇി	றீ	ም	றூ	றெ	ற	றன	றரெ	றரே	றளெ
<b>0BB1</b>	0BB1	0BB1	0BB1	0BB1	0BB1	0BB1	0BB1	0BB1	0BB1	0BB1	0BB1	0BB1
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ன்	ன	னா	ണി	ത്	ഞ	ன9	ଗ୍ଦର	කය	ഞ്ഞ	னரெ	னளே	னளெ
0BA9	0BA9	0BA9	0BA9	0BA9	0BA9	0BA9	0BA9	0BA9	0BA9	0BA9	0BA9	0BA9
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ஶ்	ஶ	υσπ	ໜິ	ீஸ	مى	uut	யி	ய	யல	மாொ	ஶோ	ஸளெ
0BB6	0BB6	0BB6	0BB6	0BB6	0BB6	0BB6	0BB6	0BB6	0BB6	0BB6	0BB6	0BB6
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ġ	g	ஜா	ജി	ജ	జ్రా	ಜ್ಞಾ	ജറെ	ജ	ജ്ഞ	ஜொ	ஜோ	ஜளெ
0B9C	0B9C	0B9C	0B9C	0B9C	0B9C	0B9C	0B9C	0B9C	0B9C	0B9C	0B9C	0B9C
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ല്	ବ୍ୟ	ஷா	ക്പി	ବ୍ୟ	ର୍ଙ୍କ	୍ୟୁତ	ବ୍ୟତି	අෙ	ഷുഞ	ஷரெ	ஷரே	ஷளெ
<b>0BB7</b>	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
സ്	സ	ஸா	സി	സ് "	൞	ஸூ	෩෧	സ	സത	ஸொ	ஸோ	ஸளெ
<b>0BB8</b>	0BB8	0BB8	0BB8	0BB8	0BB8	0BB8	0BB8	0BB8	0BB8	0BB8	0BB8	0BB8
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
ஹ்	ച	ஹா	ഞി	ഈ	ഈ	ഈ9	ഊെ	ஹே	ച്ചത	ஹொ	ஹோ	ஹளெ
<b>0BB9</b>	0BB9	0BB9	0BB9	0BB9	0BB9	0BB9	0BB9	0BB9	0BB9	0BB9	0BB9	0BB9
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
க்ஷ்	க்ஷ	க்ஷா	க்ஷி	க் ஷ ீ	க்ஷு	க்ஷூ	க்ஷெ	க்ஷே	க்ஷன	ஷரெ	க்ஷரே	ஷளெ
0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95	0B95
0BCD	0BCD	0BCD	0BCD	0BCD	0BCD	0BCD	0BCD	0BCD	0BCD	0BCD	0BCD	0BCD
<b>0BB7</b>	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7	0BB7
0BCD		0BBE	0BBF	0BC0	0BC1	0BC2	0BC6	0BC7	0BC8	0BCA	0BCB	0BCC
L												

## Notes

- [1] http://www.unicode.org/charts/PDF/U0B80.pdf
- [2] at p. 324
- [3] University of Madras Tamil Lexicon, page 148: « [ (http://dsal.uchicago.edu/cgi-bin/romadict.pl?table=tamil-lex&page=148& display=utf8) n . < <sup>1</sup> +. 1. The letter , as being regarded neither a vowel nor a consonant; . () 2. Consonants; »]

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- Mahadevan, Iravatham (2003), *Early Tamil Epigraphy from the Earliest Times to the Sixth Century A.D.*, Harvard Oriental Series, Volume 62, Cambridge: Harvard University Press, ISBN 0-674-01227-5
- Steever, Sanford B. (1996), "Tamil Writing", in Bright, William R.; Daniels, Peter B., *The World's Writing Systems*, New York: Oxford University Press, ISBN 0-19-507993-0

## **External links**

- Tamil Alphabet & Basics (http://www.unc.edu/~echeran/paadanool/pdf/introduction.pdf) (PDF)
- Unicode Chart (http://www.unicode.org/charts/PDF/U0B80.pdf) For Tamil (PDF)
- TACE 16 (http://www.tamilvu.org/coresite/download/TACE16\_Report\_English.pdf) (PDF)

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### Sinhalese

### Vowels and Diphthongs (see Note 1)

đ	а	ළු	ē
ආ	ā	Ø	0
đĩ	ă	ଡି	ō
Ħ	â	සිට	r
ð	i	<b>66</b> 33	ŗ
Ő	ī	Ø	Ţ
Ĉ	u	ඐ	ī
ඌ	ū	රළු	ai
එ	е	ඔා	au

#### Consonants (see Note 2)

Gutturals		Palatals			Cerebrals	Dentals			
ක	ka	ච	са	G	ţa	ත	ta		
ଯ	kha	ଷ	cha	ධ	ţha	ර	tha		
ග	ga	ଟ	ja	ඩ	ḍa	Ę	da		
බ්	gha	ක්ඩ	jha	ඬ	ḍha	G	dha		
ඩ	'na	කිදි	ña	Ø	ņa	න	na		
Labials		Semivowels			Sibilants	Asp	Aspirate		
Ö	ра	ය	ya	ୠ	śa	හ	ha		
ඵ	pha	Ó	ra	ම	şa				
ଯ	ba	©	la	ස	sa				
භ	bha	Ċ	ļa						
Ø	ma	ව	va						
Anusvāra (see Note 3)		Visa	arga		Avagraha	Saññaka (s	see Note 4)		
ಂ	ŵ	း	ķ	¢	' (apostrophe)	c			

#### Notes

1. Only the vowel forms that appear at the beginning of a syllable are listed; the forms used for vowels following a consonant can be found in grammars; no distinction between the two is made in transliteration.

- 2. The vowel *a* is implicit after all consonants and consonant clusters and is supplied in transliteration, with the following exceptions:
  - a) when another vowel is indicated by its appropriate sign; and
  - b) when the absence of any vowel is indicated by the sign of called *virāma*.
- 3. Exceptions: Anusvāra is transliterated by:
  - a) *i* before gutturals,
  - b) *ñ* before palatals,
  - c) *n* before cerebrals,
  - d) *n* before dentals, and
  - e) *m* before labials.
- 4. Exceptions:
  - a) when saññaka represents a nasal, it is romanized according to the rule for anusvāra.
  - b) when *saññaka* is combined with an aspirated consonant, the combination is romanized as a non-aspirated, followed by an aspirated consonant.

## Malayalam

## Vowels and Diphthongs (see Note 1)

അ	а	8	ī
ആ	ā	ഌ	ľ
U	à (see Note 2)	എ	е
ഇ	i	ഏ	ē
ഈ	ī	ഐ	ai
୭	u	6	0
ອງ	ū	ഒാ	ō
99	r	ଌ୰	au

## Consonants (see Note 3)

Gutturals Palat		tals Cerebrals			Dentals		
ക	ka	ച	са	S	ţa	ത	ta
ഖ	kha	ഛ	cha	0	<u>ț</u> ha	ம	tha
S	ga	8 S	ja	ŝ	ḍa	в	da
ഘ	gha	ഡ	jha	ഢ	ḍha	ω	dha
ങ	'na	ഞ	ña	ണ	ņa	m	na
Labials Semiv		vowels	Si	bilants	A	spirate	
പ	ра	W	уа	S	śa	ഹ	ha
ഫ	pha	0	ra	ഷ	şa		
ബ	ba	0	ra	$\mathbb{C}$	sa		
ß	bha	0.0	<u>tt</u> a (see Note	e 4)			
മ	ma	ല	la				
		ള	ļa				
		ъ	la				
		വ	va				
Anus	<i>vāra</i> (see Note	5)	Vi	sarga		Avag	graha
o	'n		0	Ņ		ſ	' (apostrophe)

#### Notes

- Only the vowel forms that appear at the beginning of a syllable are listed; the forms used for vowels following a consonant can be found in grammars; no distinction between the two is made in transliteration.
- 2. When " is used in combination with the vowel  $u(\underline{o})$ , the combination is also transliterated  $\dot{a}$ .
- 3. The vowel *a* is implicit after all consonants and consonant clusters and is supplied in transliteration, with the following exceptions:
  - a) when another vowel is indicated by its appropriate sign;
  - b) when the absence of any vowel is indicated by the superscript sign <sup>v</sup> (also used for the vowel *â*); and
  - c) when the following modified consonantal forms are used:

ക	k	ൻ	n	ൽ	I	ბ	r
ൺ	ņ	ൽ	t	ൾ	ļ		

- 4. When  $\circ \circ$  appears as a subscript in a cluster, it is transliterated <u>ta</u>.
- 5. Exception: *Anusvāra* is transliterated by:
  - a) *i* before gutturals,
  - b) ñ before palatals,
  - c) *n* before cerebrals,
  - d) *n* before dentals, and
  - e) *m* before labials.