

Discussion Draft

**Basics of Sanskrit Letters
(with Tamil and Malayalam Letters)**

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1 Sanskrit Letters

1.1 Vowels:

Vowels are called Svaraa (स्वराः) (plural) in Sanskrit. See the table below.

Srl No	Sanskrit	Tamil	Malayalam		General English Transliteration representation
1	अ	அ	അ		a
2	आ	ஆ	ആ		aa or A
3	इ	இ	ഇ		I (or e)
4	ई	ஈ	ഈ		I (or ee)
5	उ	உ	ഉ		u
6	ऊ	ஊ	ഊ		U
7	ऋ	* ഴ	ഋ		Ru
8	ॠ	* ഴ	ॠ		RU
9	ॡ	* ഴ ॡ	* ॡ		IRu
10	ॢ	* ॢ ॢ	* ॢ		IRU

10A	*	எ	എ		ey (ae)
11	ए	ஏ	ഏ		Ey (aE)
12	ऐ	ஐ	ഈ		ai
12A	*	ഓ	ഔ		o
13	ओ	ഓ	ഔ		O
14	औ	ഔ	ഔ		au
15	अं	* அம்	അം		am
16	अः	* அஹ	അഃ		a: or aH

The * represents that letter is **not** available or an integral part or used in that language. The letters typed in Tamil/Malayalam represents how it is read.

ऋ (*ॠ) shall be pronounced as in Crystal or Krishna. The lips do not converge when we say this letter or any consonant formed with this letter.

ॠ (called the Ayuda letter) sounds similar to H part of aha: in Tamil.

This is not in Sanskrit.

1.1.1 Short Vowels (ह्रस्व स्वराः)

These letters have short sound with no elongation.

The time unit of uttering one such letter (ह्रस्व स्वराः) is defined as Maatra.

अ इ उ ऋ लृ

1.1.2 Long Vowels (दीर्घ स्वराः)

These letters have sound with an elongation equal to twice that of Short vowels.

The time value of these letters is two Maatras.

आ ई ऊ ऋ लृ

ए ऐ ओ औ are called Misra Svaraa (मिश्र स्वराः) (**Diphthong** in English)

These are formed with the combination of two vowels.

अ + इ = ए ; आ + ई = ऐ ; अ + उ = ओ ; आ + ऊ = औ

1.1.3 Support Vowels:

अं , अः are called support vowels.

अं is called Anuswara;(अनुस्वर)

अः is called visarga;(विसर्ग)

When "aha" is said, the "ha" part of "aha" gets only half time scale (the maatra) and

the maatra for 'aha' is one and a half. अं has one and half maatra. (a+m)

1.2 Consonants: (व्यञ्जनानि)

Sanskrit Consonants

क ख ग घ ङ

च छ ज झ ञ

ट ठ ड ढ ण

त थ द ध न

प फ ब भ म

य र ल व श स ष ह ळ

Tamil Consonants

க க₂ க₃ க₄ ங

ச ச₂ ஐ ஐ₂ ஞ

ட ட₂ ட₃ ட₄ ண

த த₂ த₃ த₄ ந

ப ப₂ ப₃ ப₄ ம

ய ர ல வ ழ* ற*(*not in Sanskrit) ள ன

Malayalam Consonants

ക ഖ ഗ ഘ ങ

ച ഛ ജ ഝ ഞ

ട ള ഡ ണ

ത മ ദ ധ ന

പ ഫ ബ ഭ മ

യ ര ല വ സ ശ ഷ ഹ റ റ ള ക്ഷ ഴ*

1.2.1 Notes on Consonants:

In Tamil language there are no four variants of ka, cha, Ta, ta and pa.

There is only one ka,cha,Ta,ta,pa. So how to pronounce the word and learning the sound effect becomes an issue for a new learner.

In Malayalam, there are distinct four variants of ka,cha,Ta,ta and Pa and no "IRu " and "IRU"

Important Tip: Please observe that the vibration of the sound moves more from the tip of the tongue/front portion to the back of the tongue and throat as the variants move from Serial numbers of 1 to 4 above.

1.2.2 Source of Sound

There are five basic distinct places from which sound emanates in Sanskrit.

They are :

- a) The **soft palate**. The soft palate is the fleshy region at the very back of the mouth.
- b) The **hard palate**. The hard palate is the bony region on the top of the mouth.
- c) The area behind the **hard bump** on the roof of the mouth. This bump sits behind the teeth.
- d) The **base of the teeth**.
- e) The **lips**.(touching each other)

The understanding of this helps to create the right sound in Sanskrit for the learner.

This is similar in many Indian Languages. The Sanskrit names for the Groups for Consonants indicate the place of sound generation/reverberation.

1.2.3 Gutturals: (कण्ठा)

These Consonants are referred as Gutturals in English. The sound emanates through use of back of the tongue touching the soft palate. (back of the mouth).

In Sanskrit KaNTha means neck.

Group 1 Sanskrit	क	ख	ग	घ	ङ
English Representation	ka	kha	ga	gha	~nga (nasal)
Tamil	க	*க ₂	*க ₃	*க ₄	ங
Malayalam	ക	ഖ	ഗ	ഘ	ങ

The **first two** letters of 'ka' varga are called **Hard Consonants**.

The rest three are **soft** consonants.

1.2.4 Palatals: (तालु)

These Consonants are referred as Palatals in English. The sound emanates using the flat of the tongue against the back of the hard palate (front of mouth behind the teeth).

In Sanskrit the word tAlu means Palate.

Group 2	च	छ	ज	झ	ञ
English Representation	ca	cha	ja	jha	gya (nasal)
Tamil	ச	*ச ₂	*ஜ	*ஜ ₂	ஞ
Malayalam	ച	ഛ	ജ	ഝ	ഞ

The first two letters of 'cha' varga are called **Hard** Consonants.
The rest three are soft consonants.

1.2.5 Cerebrals: (मूर्धन्)

These Consonants are referred as Cerebrals in English. The sound emanates by using the tip of the tongue against the top of the hard palate.

In Sanskrit mUrDhan means forehead or head depending on the context of the statement.

Group 3	ट	ठ	ड	ढ	ण
English Representation	Ta	Tha	Da	Dha	Na
Tamil	᳚	*᳚ ₂	*᳚ ₃	*᳚ ₄	ண
Malayalam	ട	ഠ	ഡ	ഢ	ണ

The first two letters of 'Ta' varga are called **Hard** Consonants.
The rest three are **soft** consonants.

1.2.6 Dentals: (दन्त)

These Consonants are referred as Dentals in English. The sound emanates by using the tip of the tongue against the top front teeth at its lower part. In Sanskrit danta means teeth.

Group 4	त	थ	द	ध	न
English Representation	ta	tha	da	dha	na
Tamil	த	*த ₂	*த ₃	*த ₄	ந(notes)
Malayalam	ത	ഥ	ദ	ധ	ന

The first two letters of 'ta' varga are called **Hard** Consonants.
The rest three are soft consonants.

Notes: In Sanskrit there is only one 'na' - न. In Tamil there are two 'na's – ன which is light in sound and the other one, ன which has little more stress. Please note that both get used depending on how the word is represented in Tamil. A sentence/word can only begin with ன (in Tamil). We write Annam and manam in Tamil as அன்னம், மனம்.

While reading Sanskrit texts or Vedas, the 'na' must be pronounced in the one way only as ன.

1.2.7 Labials: (ओष्ठौ)

These Consonants are referred as Labials in English. The sound emanates by using the lips. The lips get in touch always. In Sanskrit OshTa means lip. OshTau is dual, meaning lips.

Group 5	प*	फ*	ब	भ	म
English Representation	pa	pha	ba	bha	ma
Tamil	ப	*ப ₂	*ப ₃	*ப ₄	ம
Malayalam	പ	ഫ	ബ	ഭ	മ

The first two letters of 'pa' varga are called **Hard** Consonants.
The rest three are soft consonants.

The fifth letter in each of the group is called Nasal letters as they tend to have a nasal twang while pronouncing them.

1.3 Other Consonants:

The other Consonants are grouped into three. They are given below:

1.3.1 Semi-Vowels: (अन्तस्था)

The word antasthA means standing at end.

	य	र	ल	व	
English Representation	ya	ra	la	va	
Tamil	ய	ர	ல	வ	
Malayalam	യ	ര	ല	വ	

All the above four letters are **Soft** Consonants.

Note: Tamil has an additional ் which has a stress. This ் is not used/available anywhere in Sanskrit. But 'tra' sound comes from usage of the four variants of 'Ta'.

1.3.2 Sibilants: (ऊष्मन्)

The word Ushman means Sibilant in linguistic context.

	श	ष	स		
English Representation	Sa	sha	sa		
Tamil	*ஸ	*ஷ	*ஸ		
Malayalam	ശ	ഷ	സ		

All these three are **Hard** Consonants.

Note: There is no “Sa” (स) in Tamil language. The above letter is used specifically for representing “Sa” in Tamil Veda and Sloka books which is in original Sanskrit.

In Traditional Tamil ഷ,സ,ജ are also not there. These have come in to represent sounds that are taken from other languages, especially Sanskrit.

There is a separate Grantha Lipi in Tamil that was evolved to represent and publish Vedic Texts. Many Paatashalaas teach Tamil Vedic students through Grantha Lipi. It is also used in some parts of Kerala.

1.3.3 Aspirate: (सोष्मता)

The words Oshmataa means aspiration,heat and warmth.

	ह				
English Representation	ha				
Tamil	ஹ				
Malayalam	ഹ				

This is a soft consonant.

Note: There is no ഹ in Sanskrit. ഹ is used in Tamil and Malayalam only.

Malayalam as a language has got four variants of consonant letters and ഹ,

so it is completely friendly to learn both Devanagari and Dravidian languages as per some Scholars.

1.3.4 MahapraNa and Alpaprana

Consonants with breath are termed as MahapraNa and without breath as Alpaprana.

The 1st and 3d letters of each varga (group), together with the 5th [nasals] are Alpaprana.

The semivowel group letters are Alpaprana.

The rest of the letters are MahapraNa.

When we say 'ka' or 'ga' it is light without any distinct flow of air or stress. It is Alpaprana

When we say 'kha' or 'gha', there is a distinct breath/air flow in uttering the word.

This is MahapraNa.

1.4 Other Letters

Note: The following letters are used in normal Sanskrit texts.

These are Conjuncts (संयुक्त अक्षर). This is explained below in the next section.

	क्ष	श्र	ज्ञ	ळ*	
English Representation	ksha	Sra	Jgya(nasal)	La	
Tamil	*ക്ഷ	*ശ്ര	*ജ്ഞ	ள	
Malayalam	ക്ഷ	ശ്ര	ജ്ഞ	ള	

क्ष is formed by adding ख् + ष; क्ष = क₂+ ष ; क्ഷ = क् + ष

श्र is formed by adding श् + र ; श्र = श + र ; ശ്ര = ശ + ര

ज्ञ is formed by adding ज्+ ज ; ज्ञंञ = ज्ञं + ञ;

ज्ण = ज्ञ + ण

ळ* is not a conjunct but a special consonant.

This does not find place in some books as a part of standard letters.

1.5 Conjunct Letters

Conjuncts are letters formed with a combination of two or more letters.

They are Vowel based conjuncts and non-vowel conjuncts.

Swarayukta Akshara/Consonants(*(व्यञ्जनानि)*) are formed by a combination of a

Consonant with a Vowel. The Basic letters in Sanskrit seen above in 1.2 and 1.3 are Swarayukta Aksharaas.

1.5.1 Vowel based Conjuncts (Swarayukta Akshara) (स्वरयुक्त अक्षर)

Vowel based conjuncts are letters formed with a combination of a Consonant and a vowel; the vowel sound comes always at the second part of the Conjuncts.

Please note that to form any Conjunct basically a Vowel (sound) is required.

Vowel : अ आ इ ई उ ऊ ए ऐ ओ औ अं अः ऋ ॠ

Consonant : क् क का कि की कु कू के कै को कौ कं कः कृ कृ कु

1.5.2 Example of 'ka' varga letters

क् + अ = क , क्+ आ = का , क्+ इ = कि , क्+ ई = की

क् + उ = कु , क्+ ऊ = कू , क्+ ए = के , क्+ ऐ = कै .

क् + ओ = को , क्+ औ = कौ, क्+ अं = कं , क्+ अः = कः

क् + ऋ = कृ , क्+ ॠ = कृ,

कं + अ = क , कं+ आ = का , कं+ इ = कि , कं+ ए = कै

कं + उ = कु , कं+ ऊ = कू , कं+ ए = के , कं+ ऐ = कै .

कं + ओ = को , कं+ औ = कौ, कं+ अं = कं , कं+ अः = कः

कं + ऋ = कंॠ , कं + ॠ = कंॠ,

कँ + अ = क, कँ + आ = का, कँ + इ = कि, कँ + ए = कै

कँ + उ = कु, कँ + ऊ = कू, कँ + ए = के, कँ + ऐ = कै .

कँ + ओ = को, कँ + औ = कौ, कँ + अं = कं, कँ+ अः = कः

कँ + ऋ = कंॠ , कँ + ॠ = कंॠ

1.5.3 Base Letters (Halant) (हलन्त)

The letters of each Consonant group is formed through a base letter like क्, च्, त् and a vowel. These are pronounced as ik, ich, ith. They have a slanted stroke below. This is known as Halant (हलन्त) in Sanskrit. Let us call them as Base Letters for our understanding.

1.5.4 Maatra Letters:

𑌕, 𑌖, 𑌗, 𑌘, 𑌙, 𑌚, 𑌛, 𑌜, 𑌝, 𑌞, 𑌟 are the shapes that give the sound of extension like aa, e, ee, Ru, ou, O etc which are derived from the first letter 'ka'. When a letter has these shapes, they are called Maatra letters. This is different from the term 'Maatra' with respect to time scale of the letters.

Maatra shapes in Tamil - 𑌕, 𑌖, 𑌗, 𑌘, 𑌙, 𑌚, 𑌛, 𑌜, 𑌝, 𑌞, 𑌟.

𑌕, 𑌖, 𑌗 do not have maatra shapes distinctly like in Sanskrit. E has a separate shape. Ye has an extension below. 'O' has a round below the normal 'o'.

𑌕, 𑌖, have extensions to the shape of Ka. Similarly the 'u,U sounds have extensions of base letters which differ based on the letter.

Examples: 𑌕 𑌖, 𑌗 𑌘, 𑌙 𑌚, 𑌛 𑌜, 𑌝 𑌞, 𑌟 𑌠.

Some shapes in Sanskrit and Tamil are not directly comparable.

Malayalam Examples: 𑌕 𑌖, 𑌗 𑌘, 𑌙 𑌚, 𑌛 𑌜, 𑌝 𑌞, 𑌟 𑌠

1.5.5 conjuncts (Samyuktakshara) (संयुक्त अक्षर)

Samyuktakshar or a conjunct character represents a syllable made up of two or more consonants from the basic set. In that Consonant (or Consonants) a basic vowel sound is present in its formation. The Vowel sound is evident in the last part of the Akshara(letter).

Examples : gna, gra, hla, hya, 𑌕𑌖, 𑌕𑌗, 𑌕𑌘, 𑌕𑌙,

Tamil Equivalentents: 𑌕𑌖, 𑌕𑌗, 𑌕𑌘, 𑌕𑌙

Malayalam Equivalentents: 𑌕𑌖, 𑌕𑌗, 𑌕𑌘, 𑌕𑌙,

Formation of the akshara:

गृ + न = गृन , गृ + र = गृर , हृ + ल = हृल , हृ + य = हृय

க்3+ந = க்3ந , க்3+ர = க்3ர , ஹ்+ ல = ஹ்ல , ஹ்+ய = ஹ்ய

ഗ് + ന = ഗ്ന , ഗ് + ര = ഗ്ര, ഹ് + ല = ഹ്ല , ഹ് + യ = ഹ്യ

These are examples of two consonants forming a Samyuktakshara. The ending sound is that of the vowel which forms the base of the second/last akshara. Here it is 'a'

Actually, गृ + (न् + अ) = गृन.

In tamil , க்3 + (ந் + அ) = க்3ந

In Malayalam - ഗ് + (ന് + അ) = ഗ്ന.

That is why it is said that a vowel (swara) is required to form any letter.

As a general rule, consonants in a conjunct are written in their half form except for the final consonant which is written in its full form. There are exceptions to this rule when the consonants do not have a clear half form. But the representation of the form will be different depending on the combination of the letter. There is no single rule as to how it is represented in books. Over a period some letters are represented in a standard form across books. Some letter may not be. Therefore the reader must familiarise with the convention followed in that book.

The standards of software Fonts in Sanskrit differ slightly and therefore, there are differences in representation. Sometime ease of usage or typing takes precedence over standard conventions. Use of modern lipi poses its own convenience but also hinders the traditional representation.

We will see some examples of the representation of these Aksharas:

1.5.6 Letters appearing one after the other

Sanskrit Consonant	How formed	Tamil Letter representation	Malayalam Letter representation	
स्त	स् + त	ஸ்+த=ஸ்த	സ്+ത=സ്ത	
क्य	क् + य	க்+ய=க்ய	ക്+യ=ക്യ	
त्य	त् + य	த்+ய=த்ய	ത്+യ=ത്യ	
ग्न	ग् + न	க் ₃ +ந=க் ₃ ந	ഗ് + ന	
व्य	व् + य	வ் + ய =வ்ய	വ് + യ	
क्ष्य	क्ष् + य	க்ஷ்+ய=க்ஷ்ய	ക്ഷ് + യ	
भ्य	भ् + य	ப் ₄ +ய=ப் ₄ ய	ഭ് + യ	

1.5.7 Letters after one below the other

If the letters are represented as one below another, the components of the letters must be read from the top to bottom. The top letter will be read as Halant letter (base letter with the sound like ip,ik,ih,it,ir etc).

Sanskrit Consonant	How formed	Tamil Letter representation	Malayalam Letter representation	
क्क	क् + क	க்+க=க்க	ക്+ ക	
ङ्ग	ङ् + ग	ங்+க ₃ =ங் ₃	ങ് + ഗ	

झ	ड् + भ	தீ ₃ + ப ₄ = தீ ₃ ப ₄	ஜ் + ஐ	
ण	ट् + ट	டீ + ட = டீட	ஜ் + ச	
झ	ड् + ध	தீ ₃ + த ₄ = தீ ₃ த ₄	ஜ் + ய	
झ	ड् + व	தீ ₃ + வ = தீ ₃ வ	ஜ் + வ	

Note: These can be represented side by side also as a different convention.

Example: धद, कक

1.5.8 Three letter sounds with different joints

Sanskrit Consonant	How formed	Tamil Letter representation	Malayalam Letter representation	
त्स्व,	त् + स् + व	தீ + ஸ் + வ	ஜ் + ஸ் + வ	
षय	ष् + ण् + य	ஷ் + ண் + ய	ஷ் + ண் + ய	
क्तय	क् + त् + य	கீ + தீ + ய	கீ + ஜ் + ய	
ङ	ङ् + क् + त	ஙீ + கீ + த	ஙீ + கீ + த	
त्र्य	त्र् + र् + य	தீ + ரீ + ய	ஜ் + ஜ் + ய	

1.5.9 Letters with 'ra' and 'tra'

Sanskrit Consonant	How formed	Tamil Letter representation	Malayalam Letter representation	
त्र	त्+र	த் + ர	ത്+ര	
घ	घ्+ र	க் ₄ + ர	ഘ്+ര	
ट	ट् +र	ட்+ ர	ട്+ര	
ष्ट	ष् +ट्+र	ஷ்+ ட்+ர	ഷ്+ട്+ര	
आर्य,	आ +र्+ य	ஆ + ர்+ ய	ആ+ര്+യ	
कार्य	का+र्+ य	கா + ர்+ ய	കാ+ര്+യ	

1.5.10 Special joins and representations (esp. letter ha,dda)

These are representative examples only. A student needs to learn the vast combination of Consonant letters with continuous reading.

Sanskrit Consonant	How formed	Tamil Letter representation	Malayalam Letter representation	
ह	ह+ ल	ஹ்+ ல	ഹ്+ല	
ह्य	ह+ य	ஹ்+ ய	ഹ്+യ	
ह्र	ह+र	ஹ்+ ர	ഹ്+ര	
हृ	ह+ ऋ	ஹ்+ ள	ഹ്+ഋ	
द	द्+ द	த் ₃ +த ₃ =த் ₃ த ₃	ദ്+ ദ	

Note: These joint letters are always represented through two letters in Tamil.

In Malayalam, the joint letters are available depending on the convention used in the book. Some books print letters separately due to modification of lipi; the conventions are altered and Letters are printed separately.

1.6 Time Scale “Maatra”

Maatra can be defined as the time taken to utter one short (hrasva) letter like a, ka, cha,ti,o etc. In traditional definition of time scale, the time scale of **an Eye Wink** is called Vitharpai. Two time scale (vitharpai) equivalent of Eye wink is Kainodi, which is **snap of the fingers**. Two kainodi, that time equivalent of two snaps of our fingers is a **Maatra or Kaakapatam** (terminology used in Astrology books.) So a Maatra is equal to four winks of our eyes in the normal course.

Vedic experts say that we should not compare this to the Seconds in English system.

Maatra is the time scale of uttering a short letter. It can be done with varied speeds as the same Keethana is rendered at different speeds by two artists. The time scale of uttering each akshara should be even in terms of the Maatras value of the Akshara/letter.

However, very fast recital is not recommended in Veda Recital. It is considered as one of the six banes in recital of Veda.

General rules of Maatra values:

1. All Short letters (Hrasva Letters and Short Swarayukta Akshara) have a value of **one**.
2. All long letters (Dheerga letters and long Swarayukta Akshara) have value **two**.
3. Anuswaram and Visargam of Short letters – **one and a half**
4. Anuswaram and Visargam of long letters – **two and a half**
5. Halants – **Half**
6. For Samykta Vyagnani (Conjuncts) it will be sum total the component parts of the Akshara as to how it is formed.

1.6.1 Examples of Swara and Swaryukta Aksharas

Some examples of Maatra value (of the sound) for our basic understanding:

Sample letters in Sanskrit	In Tamil	In Malayalam	Maatra	
अ, इ, उ, क, ड चि, जु, ढि, श	அ இ உ க ங சி ஜ டி ₄ ஸ	അ, ഇ, ഉ, ക, ണ ചി, ജ, ഡി, ശ	1	
आ, ई, ऊ, औ का, डा, ची, तै	ஆ ஈ ஊ ஒள கா ஙா சீ தை	ആ, ഈ, ഊ, ഔ കാ, ണാ, ചി, തൈ	2	
अं , अः, गः टं	அம் அ: க ₃ : டம்	അം, അഃ, ഗഃ ടം	1.5	
णां, दां, नीं, रों याः शाः षैः	ணாம், தா ₃ ம், நீம், ரோம், யா:, ஸா: ஷை:	ണാം, ദാം, നീം, രോം യാഃ ശാഃ ഷൈഃ	2.5	
म् , ल् फ् स्	ம், ல், ப், ஸ்	മ്, ല് ഫ് സ്	0.5	

1.6.2 Some examples of Samyukta Aksharas

Sample letters in Sanskrit	In Tamil	In Malayalam	Maatra	
स्त, व्य, भ्य	ஸ்த, வ்ய, ப் ₄ ய	സ്ത, വ്യ, ഭ്യ	1.5	0.5 for halant and one for hrasva (short) letter
स्ता, व्यी, भ्ये,	ஸ்தா,வ்யீ ப் ₄ யே	സ്താ, വ്യീ, ഭ്യേ,	2.5	0.5 for halant and two for the dheerga (long letters)
त्स्व, ष्य,	ஸ்த்வ ஷ்ண்ய	ത്സ്വ, ഷ्य	2.0	Two half maatra each for the halants and one hrasva
भ्यां , न्तां	ப் ₄ யாம், ந்தாம்,	ഭ്യാം , ന്താം	3.0	Half for the halant, Dheerga letter with anuswaram 2.5
ष्या	ஷ்ண்யா	ഷ்ய	3.0	Two halants with 0.5 each plus dheerga letter 2
ष्यां,	ஷ்ண்யாம்	ഷ்யാം,	3.5	Above example add 0.5 for anuswaram
ष्टः	ஷ்ட ₂ :	ഷ്ടഃ	2.0	0.5 for halant, short hrasva 1.0 for Ta, visarga 0.5
हां	ஹ்நாம்	ഹ്നാം	3.0	0.5 for ih, 2 for dheerga naa, 0.5 for m

The aksharas with value of three mastras or more would be called Plutam.