

## Devanagari Script: Short vowels

अ	इ	उ	ऋ	ऌ
a	i	u	r̄	l̄

अ is pronounced as in cup, bus etc.

इ is pronounced as in inform, init etc.

उ is pronounced as in look, book etc.

ऋ has no direct equivalent and is pronounced somewhere in between ri and ru, like crystal.

ऌ is also like ऋ and is pronounced somewhere in between li and lu similar to glycerene.

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## Devanagari Script: Long vowels

The eight long vowels are

आ	ई	ऊ	ऋ	ए	ऐ	ओ	औ
ā	ī	ū	r̄	ē	ai	ō	au

The first four are the long forms of the corresponding short vowels.

ए and ओ are long vowels which do not have short forms in Sanskrit.

ऐ and औ are often likened to diphthongs though they are not strictly combinations of two vowels.

आ is pronounced as in far, bar, fall etc.

ई is pronounced as in easy, eagle etc.

ऊ is pronounced as in rooster, fool etc.

ऋ is the long form of ऋ

ए is pronounced as in fable, gray etc.

ऐ is pronounced as in my, fly etc.

ओ is pronounced as in road, goat etc.

औ is pronounced as in down, noun etc.

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## The Support Vowels

The two support vowels are known as "ubhayakshara" and are mostly appended to syllables. They are not used independently like other vowels.

They add specific sounds to the syllables they are appended to. These two support vowels are represented using the first vowel अ .

अं	अः
aṁ	aḥ

The first is known as the "anuswara" and the second "visarga" The anuswara adds a sound similar to the sound of m in "sum" to the syllable. The visarga adds a sound similar to "ha" to the syllable.

The "ha" will change depending on the vowel ending the syllable. The visarga more or less extends the vowel in the syllable with h+the same vowel as in the syllable.

Example: if the syllable ends in vowel इ then the visarga would add a sound like "hi".

There may be differences in the manner in which these two are introduced in conventional Sanskrit Primers. When reading Sanskrit, it will be necessary to render the visarga in a way that will distinguish it from the syllables ha, hi, hu etc. This may be accomplished by shortening the vowel in the visarga.

One is tempted to ask, "well how can Sanskrit be a phonetic language then, if the sound for a letter is context dependent?". We shall answer this in a later section dealing with phonetics.

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Let us look at the first consonant.

क (ka)

The generic form of क is क् . The nether stroke ् is attached below the letter क . Now, the familiar form of a consonant in Sanskrit is the form when it is sounded with the first vowel i.e., अ . Thus

क् + अ = क

Pronouncing a consonant in its generic form requires that no vowel sound be added to the consonant's generic sound. The generic sound is quite similar to the sound associated with a basic phoneme corresponding to a consonant in English. For the consonant क the associated generic sound will be like the ending syllable of the words "lake", "bake" etc..

A pure consonant is linguistically defined to be one without any vowel attached to it. Consonants can be meaningful in practice only when uttered along with a vowel. Ancient linguistic scholars referred to the vowels as "life giving" aksharas while the consonants were likened to the body.

It is common practice to introduce the consonants to the student, in the form where the first vowel अ forms the syllable with the generic sound of the consonant. Thus the student learns that क is pronounced like the first syllable of "cup" . In India, children are often taught the aksharas in this manner.

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The first group of consonants are the Gutturals.

क	ख	ग	घ	ङ
ka	kha	ga	gha	ṅa

क sounds like the first syllable in cup

ख is the aspirated form of क

ग sounds like the g in gum

घ is the aspirated form of ग

ङ sounds like the ng in finger

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The second group consists of the Palatals.

च छ ज झ ञ

ca cha ja jha ña

च sounds as in chair

छ is the aspirated form of च

ज sounds as in jar, just

झ is the aspirated form of ज

ञ sounds similar to the last syllable of the spanish word espana where the n has the combination sound of the English n and y.

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The third group of consonants are the cerebrals.

ट ठ ड ढ ण

ṭa ṭha ḍa ḍha ṇa

ट sounds similar to the t in taylor

ठ is the aspirated form of ट

ड sounds similar to the d in day, differ etc.

ढ is the aspirated form of ड

ण sounds similar to the n in fund.

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The fourth group is made up of the dentals.

त थ द ध न

ta tha da dha na

त sounds like the first syllable of thirty

थ is the aspirated form of त

द sounds like the first syllable of thus

ध is the aspirated form of द

न sounds like the n in null, name etc..

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The fifth group of consonants are the Labials.

प फ ब भ म

pa pha ba bha ma

प sounds like p in pun

फ is the aspirated form of प

ब sounds like the b in butter

भ is the aspirated form of ब

म sounds like the m in man

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## Semivowels

य	र	ल	व
ya	ra	la	va

## Sibilants

श	ष	स
śa	ṣa	sa

## Aspirate

ह
ha

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य sounds like the y in young

र sounds like the r in real, similar to the Scottish pronunciation.

ल sounds like the l in laugh

व sounds like the v in vast

श has no direct equivalent in English. It is like the "g" a German would pronounce while speaking English and saying Germany !

ष sounds like the first syllable in shall

स similar to the s in same

ह sounds like the h in harmony.

There are three other consonants that one finds in use.

ळ	क्ष	ज्ञ
ḷa	kṣa	jña

ळ is usually included in the semivowels.

It is similar to ऌ but is pronounced with the tip of the tongue folded back.

क्ष is actually a conjunct being क + ष

ज्ञ is also a conjunct ज + ञ

The first and the third are used frequently in old Sanskrit texts. The second is in common use today.

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Consonant Vowel combinations.

Sanskrit is a phonetic language. Any of the consonants can form a syllable with any of the vowels. Such combinations are written using special ligatures (specific shapes different from those of the normal vowels). The Devanagari script follows fairly consistent rules to write a consonant vowel combination. In standard literature, the term medial vowel is sometimes used to refer to vowels seen inside a word. Hence some scholars in the past have referred to the ligatures as medial vowels. We will see that while this is reasonable, exceptions do occur.

Each vowel has a special shape associated with it for use with a combining consonant. This is known as a "matra" or simply vowel extension. A matra, when added to the basic shape of a consonant, results in a syllable consisting of the consonant and the vowel.

Some matras are added to the right of the consonant, some above or below the consonant and one specific matra in Sanskrit is added to the left of the consonant i.e., before drawing the consonant.

The matras associated with the vowels are shown below.

Vowel:            अ            आ            इ            ई            उ            ऊ

matra :		।	ि	ी	ु	ू
Ex. :	क	का	कि	की	कु	कू
Vowel:	ऋ	ए	ऐ	ओ	औ	
matra :	ं	ँ	ै	ो	ौ	
Ex. :	कृ	के	कै	को	कौ	

No matra is used for the combination with अ since this is considered the basic syllable for a consonant.

In consonants having a vertical stroke in their shapes, the matras that get added above or below are drawn coinciding the vertical stroke. For consonants not having a vertical stroke, the matras are usually added centered with respect to the horizontal span of the consonant. Take द for example.

द	दा	दि	दी	दु	दू
दृ	दे	द्वै	दो	दौ	

All the thirtythree consonants strictly follow the above convention with very few exceptions.

The consonant र has an exception for combinations with उ and ऊ .

The forms for र with उ and ऊ are रु and रू respectively.

The combination of ह and ऋ is written as ह्र .

As seen above दृ and ऋ will be द्रृ .

In respect of Sanskrit, the term conjunct refers to a syllable formed with two or more consonants and a vowel.

Let us look at an example of a conjunct.

The name Krishna is familiar to one and all.

In Devanagari it is written as कृष्णा and the word is made up of the two syllables कृ and ष्णा . The first syllable has the consonant क combining with the vowel ऋ and the second syllable is a combination of ष , ण and आ .

In Sanskrit, we reckon कृष्णा as being made up of two aksharas.

Here are some examples of two consonant conjuncts.

ग्र	=	ग	+	न
म्प	=	म	+	प
स्त	=	स	+	त

Note that in the first conjunct a half form of न is attached to the vertical stroke of the first consonant. In the second and third case, the first consonant has lost its vertical stroke while the second consonant is written in full.

Over the centuries, different conventions have been adopted for writing conjuncts. We will see some variations in the next section.

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### Writing methods for Conjuncts

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. The consonants which do not have the vertical stroke in their shape come under this category.

The following 22 consonants have a vertical stroke in them.

ख	ग	घ	च	ज	झ	ञ	
ण	त	थ	ध	न	प	ब	
भ	म	य	ल	व	श	ष	स

The following do not have a vertical stroke in them.

ड      छ      ट      ठ      ड  
ढ      द      र      ह

क and फ have a stroke in the middle.

For the twentytwo shown first, the half form is obtained by simply removing the vertical stroke.

For क , the half form is व (not to be confused

with व ). The half form for फ is very close to that of प itself.

For the nine in the middle row above, a clear half form is not standardized. Often the letters are just reduced in size and placed before the succeeding consonant in the conjunct. Considerable flexibility exists in writing conjuncts with these consonants. Examples of conjuncts with these nine, will be given below.

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Here are some examples of conjuncts. Please note that there are nearly a thousand of these. Only some are included here. The information relating to IITM software has pointers to all the supported conjuncts.

ज	+	च	=	ञ
प	+	त	=	प्त
ट	+	ट	=	ट्ट
द	+	म	=	द्म
ड	+	य	=	ड्य
द	+	व	=	द्व
ड	+	क	=	ड्क
क	+	त	=	क्त
श	+	र	=	श्र
ह	+	म	=	ह्म
ट	+	र	=	ट्र
द	+	ग	=	द्ग

न	+	द	+	र	=	न्द्र
स	+	त	+	र	=	स्त्र
ष	+	ट	+	व	=	ष्ट्व

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Devanagari- Rarely used Aksharas their representations.

Among ऋ ऌ and ॡ only ऋ is normally used as a vowel with consonants. The other two are mostly used as independent vowels and in cases where they do combine with consonants, the following consonants are the ones which figure most.

ट त द ध न स combine with ऋ  
ॡ is seen mostly with क

When र combines with ऋ , it is generally shown as र्ऋ and not रृ .

Note on timing.

The short vowels are pronounced for one unit of time and the long ones two units. The unit of time is not an absolute value by itself.

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Letters which look similar and thus might confuse the student initially are shown below..

इ	ड	ह			
i	ḍa	ha			
थ	य,	भ	म,	घ	ध,
tha	ya,	bha	ma,	gha	dha,
ढ	द,	त	न,	प	ष,
ḍha	da,	ta	na,	pa	ṣa,
ब	व				
ba	va				

ख may be confused with र followed by a व i.e., र्व.

The first part of ख will in general be more curved than र but in the case of the guttural ख , the bottom

stroke will overlap with the round of the व . The comparison will be effected by writing the two aksharas one below the other.

ख

रख

The student is urged to keep these similar looking shapes in mind when learning the script.

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Conjuncts with र as the first consonant.

The consonant र is special in that conjuncts where र occurs as the first consonant, are written using a special ligature. In these conjuncts, the presence of र is indicated by a shape resembling a hook above the last consonant of the conjunct.

Let us look at a few examples.

र	+	क	=	र्क		
र	+	त	=	र्त		
र	+	क	+	य	=	कर्य
र	+	त	+	य	=	तर्य

र combines with almost every other consonant and one finds several words in Sanskrit with र as well as य in a conjunct.

Earlier, we had mentioned about a conjunct with five consonants. Here is the word with the conjunct.

कात्स्नर्या Just two syllables in the word!

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Let us now look at some conjuncts in which

र appears as the second or third consonant.

We have already seen that र belongs to the group of semivowels. Most consonants will combine with

with र and the resulting conjunct will usually end with र and an appropriate vowel. The presence of र in the conjunct will be seen through a special stroke added to the first consonant. Please observe the following carefully and remember the writing method for the consonant.

क्र	च्र	ट्र	त्र	प्र	म्र
kra	cra	ṭra	tra	pra	mra

Sanskrit books printed during the early part of the twentieth century may show variations from the above.

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Now that you have learnt the basic writing system used in Sanskrit, you might want to see for yourself how well you can identify and read the Devanagari script.

1. Identify the following aksharas and speak them. You might also wish to distinguish vowels from the consonants.

इ	ऐ	क	ल	ह
ओ	य	द	ख	त
घ	ध	र	उ	छ

2. Speak out the following aksharas.

सी	हो	बी	नौ	दे
वा	मा	तृ	लू	ढो

3. Speak out the following conjuncts.

ट्रै	क्रो	द्वि	प्रे	स्ले
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4. No clues are given but figure out what the words are. We have put spaces between the letters for you to identify the aksharas easily.

इ ङ् ग् लि ष्  
ग् री क्

ला टि न्  
ही ब्रू  
अ वे स् ता  
जा प नी स्  
अ मे रि क न्  
ओ मै गाड्  
दिस् ईस् नीट्  
गुड् एक्सेसैस्

At this point you would see the advantage of a  
phonetic system of writing!