

Proposal to Encode Kirat Rai script in the Universal Character Set
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1 Introduction

This is a proposal to encode the Kirat Rai script in the Universal Character Set. Kirat Rai is used in Sikkim and West Bengal, India, for writing the Bantawa (Rai) language. It supersedes the following documents:

- N4037 [L2/11-145](#) Introducing the Kirat Rai Script. [7]
- N4018 [L2/11-105](#) Introducing the Khambu Rai Script. [8]
- [L2/21-132](#) Preliminary document towards advancing the Kirat Rai script. [5]

2 Background

2.1 Overview

The Bantawa (बान्तावा *bāntāwā*) language (ISO 639-3: bap) is a Tibeto-Burman language of the Kiranti family that is spoken in eastern Nepal, the state of Sikkim, and West Bengal of India. It is also known as An Yüng, Bantaba, Bantawa Dum, Bantawa Rai, Bantawa Yong, Bantawa Yüng, Bontawa, and Kirawa Yüng. The approximate number of total speakers of Bantawa throughout Nepal and India is 370,000 [18]. While Devanagari is used for writing Bantawa in Nepal, the Kirat Rai (କିରାତ ରୈ) script is recognized as the official script to write the same language in Sikkim.

The terms Bantawa, Rai, Kira(n)t(i) and Khambu are used rather interchangeably and inconsistently. Kirat is a macro-ethnonym while Rai is a surname. Khambu is an endonym linked to ethnic area called Khambawan while Bantawa is both a glottonym and micro-ethnonym. Refer to the table below for the categories of these terms.

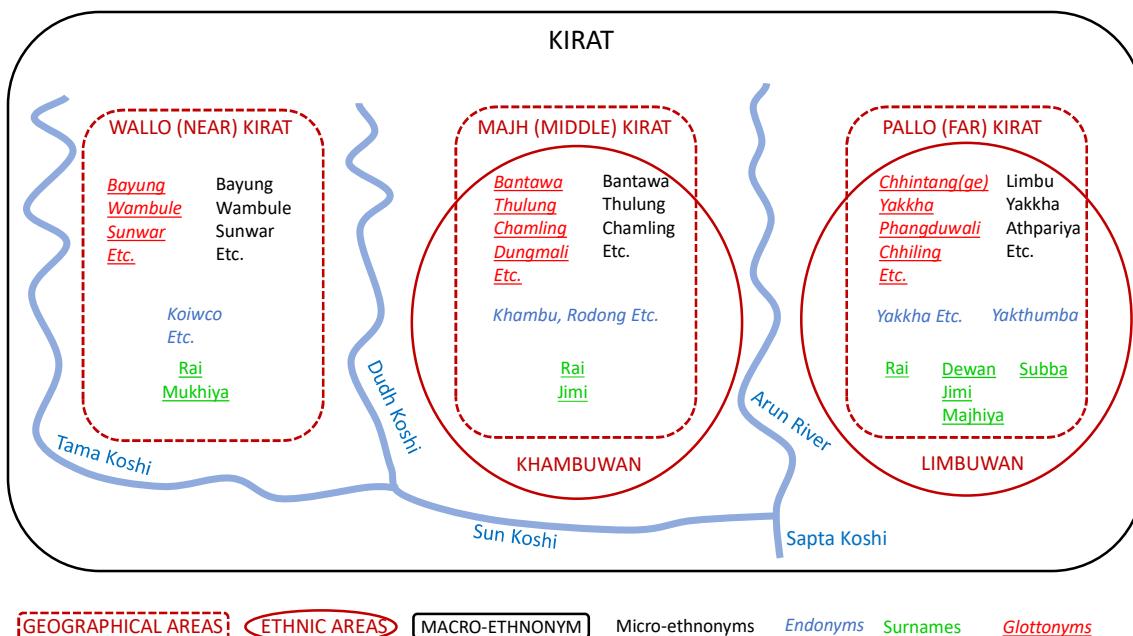


Diagram 1. Some examples of identity categories that refer to different groups within Kirat [4]

The origin of the *Kirat Rai* script goes as far back as the 1920s in which Mahaguru Tika Ram Rai of Darjeeling invented the ‘*Sumhung Lipi*’ for preparing ‘*Sumhung*’ (religious Rai book). It was derived from the Old Kirat Lipi (from which the Limbus have derived the Sirijonga Lipi or Limbu script). See

Table 4 for a comparison of Kirat Rai and Limbu scripts. In 1969, Guru Kripasalyan Rai of West Sikkim reintroduced and popularized that script as ‘*Kripasalyan Lipi*’ by publishing his book ‘*Rāī Akṣarko Barṇamālā*’.

In 1995, the Sikkim Legislative Assembly passed Bill and included Bantawa language as Official Language of the State along with Nepali, Bhutia, Lepcha and Limbu. In the Bill the Bantawa language is referred to as ‘Rai’ language. In 1996, the Bantawa language was recognized as the lingua franca among the Kirat Rai people of the Sikkim State in the annual meeting of the *Akhil Kirat Rai Sangh Sikkim*. In 1998, *Khambu Rai* script (L2/11-105) was adopted as the official script of Kirat Rai until 1999. In 2000, a team under the leadership of Bhakta Bahadur Rai and B.B. Rokdung Rai reshaped the glyphs and redesigned the *Khambu Rai* script into the current *Kirat Rai* script (L2/11-145) taking into account orthographical, phonological, and printing issues, etc. They removed some redundant letters after phonological analysis. They reshaped all the diacritics and added some extra signs and a vowel. The comparison of these scripts can be seen in Table 3.

Since 2000, the *Kirat Rai* script has remained stable and is still used as the official script for the Kirat Rai language (in India) and the *Khambu Rai* script is no longer in use. The first ever computer font was created by Bikram Rai in 2000 which is used in this proposal. *Kirat Rai* script is also called ‘*Khambu Rai Lipi*’ in West Bengal [2]. In January 2003 two textbooks, *Rāī Chāmāri Lāchep* རྩେଚ གྲୋନ୍ རྩେଚେପ (Rai alphabet textbook) for primary class and *Rāī Yañ Chāpalāyāk-Busī Dak* རྩେ རླୁ རླୁ རླୁ རླୁ རླୁ (for class I) have been printed by the AKRS. (see Figures 20-28) [9].

2.2 Usage

The Kirat Rai script is currently used in writing and print for various purposes:

- **Educational Materials:** Primary educational materials for teaching Bantawa and Kirat Rai are published by Govt. of Sikkim. Examples of script primers are རྩେ རླୁ རླୁ རླୁ རླୁ *Hopchāp-Cāichāp* (2021), རྩେ རླୁ རླୁ རླୁ རླୁ *An Yañ-o Chāpbopcañ* (2019), རླୁ རླୁ རླୁ *Yāyatūm* (2021) and རྩେ རླୁ རླୁ *An Chāplābop* (2021). The Department of Education of the Government of Sikkim is publishing Bantawa Rai school textbooks up to upper secondary level education. Central Board of Secondary Education is conducting Board examination for Rai (Bantawa) every year. (see Fig.12) [3]
- **Literary Works:** Bantawa poetry རླୁ རླୁ རླୁ རླୁ *Sāvāyinsā Sinpāsin* and novel རླୁ རླୁ *Summit* are printed in this script.
- **Newspapers:** A Bantawa (‘Rai’) edition of the *Sikkim Herald* (ସିକ୍କିମ ହେରଲ୍ଡ) is produced in Kirat Rai. The newspaper was first published in 2000 and maintains an active circulation (see Fig.13). The first edition was written by Bhakta B. Rai. Now editions are written by Prabhat Shiwhahang Rai [16].
- **Linguistic Works:** Grammar book of Bantawa for elementary level i.e. རླୁ རླୁ *Rāī Yañ Sāseñayāñ* (2011) by Prabhat Shiwhahang Rai (see Fig.15) and Nepali-Rai Dictionary i.e. ନେପାଲୀ-ରାଈ ଚିତ୍ରମୟ ଶବ୍ଦକୋଶ *Nepālī-Rāī Citramay Śabdakoś* by B.B.Rokdung written in this script (see Fig.14). [15]
- **Government Records:** Proceedings of the Sikkim legislative assembly are translated into Bantawa using the script.
- **Academic Works:** The script is used in several scholarly works on the Bantawa language and it is also the focus of scholarly attention.
- **Ephemera:** West Bengal Khambu Rai Development Board, Darjeeling produces and distributes Kirat Rai Chart (see Fig 5a & 5b).
- **Digital Resources:** Kirat Rai has been adapted for use in digital media. A digitized font for the script named ‘Kirat Rai font’ was developed by Bikram Rai. It is based upon a non-Unicode encoding and is mapped to Latin letters. The font is used for publishing the *Sikkim Herald* [16] and by CBSE [3] in their question paper.

3 Writing System

3.1 Script Name

The original proposal documents were for two scripts: Kirat Rai and Khambu Rai. It has also been called ‘Kirat’ or ‘Rai’. ‘Rai’ would be too generic a name for the script as that term is widely used even with last names of individuals in the region. We suggest ‘Kirat Rai’ (most commonly used) or ‘Kirat Khambu Rai’ as the name for the script. ‘Kirat Rai’ is used in this document. The proposed characters are intended for representing historical and current forms of Kirat Rai.

3.2 Structure

Kirat Rai is an alpha syllabic writing system based on a simplified Brahmi model. It is written from left to right. The script does not have the rendering complexity of traditional Brahmic scripts (no reordering, no combining marks, and no conjuncts). Consonants may have an inherent vowel; it typically is pronounced [a] or [ʌ], normally never occurs in final position. The script has no system of conjuncts but it has *virama* and *saat* to mute the inherent vowel [§3.6.1]. There is a vowel letter which functions as a vowel carrier.

The set consists of 58 characters: 1 independent vowel, 31 consonants, 8 vowels, 6 other signs, 2 punctuation marks, and 10 digits.

There is absence of *letter nna* and *letter ssa* in Kirat Rai as per Brahmi model. In L2/11-145, the letter *SA* was placed after *SHA* per the normal Brahmi model. This proposal places the letter *SA* before the letter *SHA* as this is the order used in Kirat Rai (see Fig. 3).

3.3 Independent Vowel

There is a single vowel letter which functions as a vowel carrier. Other vowels are represented as dependent signs (see Fig. 1, 5a, 6, 7, 10). Independent forms of other vowels are produced by writing those vowels with this letter.

letter	Name of the character
ঁ	KIRAT RAI LETTER A

3.4 Consonants

There are 31 consonants. Two of the consonants are not always included in the alphabet charts (see Fig. 4, 6). These are KIRAT RAI LETTER NYA and KIRAT RAI LETTER SHA. However, there certainly is evidence of usage in many of the charts and school books (see Fig. 3, 5b, 10, 24, 25). KIRAT RAI LETTER NYA (see Fig. 3, 4, 5b, 10, 24) and KIRAT RAI LETTER DDHA (see Fig. 3, 4, 5b, 6, 9, 10, 25) are difficult to find in running text (these sounds may not occur in Bantawa, but they are likely used for borrowed words). They are however, taught in the school books referenced. Thus, all of these should be encoded:

letter	Name of the character
କ	KIRAT RAI LETTER KA
ଖ	KIRAT RAI LETTER KHA
ଗ	KIRAT RAI LETTER GA
ଘ	KIRAT RAI LETTER GHA
ଙ	KIRAT RAI LETTER NGA
ଚ	KIRAT RAI LETTER CA
ଘୁ	KIRAT RAI LETTER CHA
ଝ	KIRAT RAI LETTER JA
ଝୁ	KIRAT RAI LETTER JHA
ତ୍ୟ	KIRAT RAI LETTER NYA
ତ୍ତ୍ୟ	KIRAT RAI LETTER TTA
ତ୍ତ୍ଵା	KIRAT RAI LETTER TTHA
ତ୍ତ୍ବା	KIRAT RAI LETTER DDA
ତ୍ତ୍ବା	KIRAT RAI LETTER DDHA
ତ୍ତ୍ବା	KIRAT RAI LETTER TA
ତ୍ତ୍ବା	KIRAT RAI LETTER THA
ତ୍ତ୍ବା	KIRAT RAI LETTER DA
ତ୍ତ୍ବା	KIRAT RAI LETTER DHA
ତ୍ତ୍ବା	KIRAT RAI LETTER NA
ତ୍ତ୍ବା	KIRAT RAI LETTER PA
ତ୍ତ୍ବା	KIRAT RAI LETTER PHA
ତ୍ତ୍ବା	KIRAT RAI LETTER BA
ତ୍ତ୍ବା	KIRAT RAI LETTER BHA
ତ୍ତ୍ବା	KIRAT RAI LETTER MA
ତ୍ତ୍ବା	KIRAT RAI LETTER YA
ତ୍ତ୍ବା	KIRAT RAI LETTER RA
ତ୍ତ୍ବା	KIRAT RAI LETTER LA
ତ୍ତ୍ବା	KIRAT RAI LETTER VA
ତ୍ତ୍ବା	KIRAT RAI LETTER SA
ତ୍ତ୍ବା	KIRAT RAI LETTER SHA
ତ୍ତ୍ବା	KIRAT RAI LETTER HA

3.5 Vowel Signs

There are 8 “dependent” vowels (see Fig. 1, 5a, 6, 7, 10, 22):

letter	name of the character
I	KIRAT RAI VOWEL SIGN AA
়	KIRAT RAI VOWEL SIGN I
়	KIRAT RAI VOWEL SIGN U
়	KIRAT RAI VOWEL SIGN UE
়	KIRAT RAI VOWEL SIGN E
়	KIRAT RAI VOWEL SIGN AI
়	KIRAT RAI VOWEL SIGN O
়	KIRAT RAI VOWEL SIGN AU

These vowel signs can be used with KIRAT RAI LETTER A or with consonants. For example, a+au (ଅଉ) or pa+au (ପାଉ) are used.

These should all be encoded atomically. This is because linguistically these vowels are not composed of two separate characters, they are single vowels in their own right. It is true that the custom encoded Kirat Rai font uses decomposed vowel signs as a matter of expediency, but this decision should not influence the right way to encode the script. Because the glyph for some of the vowels (aa and e) are part of the shape of the last 3 vowels (ai, o, au) there should be canonical decompositions for the last 3 vowels. With these decompositions, Do Not Use tables are not necessary.

Following the similar **New Tai Lue** vowel sign names, these are called “VOWEL SIGN”. **New Tai Lue** also gives these the General Category of “Lo” (Other_Letter).

3.5.1 VOWEL SIGN UE <U>

This proposal includes KIRAT RAI VOWEL SIGN UE which was not included in L2/11-145. It represents central unrounded closed phoneme *ü* [i]. Bantawa language does have this unique type of phoneme in comparison to other Kiranti languages. It is represented in Devanagari with ତ୍ରୀ and sometimes by ତ୍ରୀ. For examples:

ତ୍ରୀ *Hii* ଶ୍ରୀ ‘Blood’ and ତ୍ରୀ *Pii* ଶ୍ରୀ ‘Snake’, etc.

Because this is a separate vowel, and because the circle is usually positioned above the loop (See Fig. 5a, 10, 28), there should not be an attempt to encode this as *vowel sign u* plus *sign yupi*.

See Fig. 1, 5a, 10, 17d, 28.

3.6 Various Signs

There are 6 various signs. This proposal includes the *virama* proposed in L2/11-145. The name for *candrabindu* was changed to *anusvara* (as discussed in 3.6.2) and adds four more signs as discussed below (see Fig. 10):

letter	name of the character
•	KIRAT RAI SIGN ANUSVARA
়	KIRAT RAI SIGN TONPI
়	KIRAT RAI SIGN VISARGA
-	KIRAT RAI SIGN VIRAMA
^	KIRAT RAI SIGN SAAT
়	KIRAT RAI SIGN YUPI

Because the Kirat Rai Signs are all visually on the baseline, and the modifier letters that were similar are mostly below the baseline, it seems best to encode these in the Kirat Rai block. This will mean there will not be font fallback issues.

The spacing signs, VIRAMA, ANUSVARA, TONPI, VISARGA, and SAAT could be assigned a General Category of “Lm” (Modifier_Letter) or of “Lo” (Other_Letter). Because these characters have the appearance of modifier letters, we have used “Lm”. Examples of other characters using "Lm":

```
0559;ARMENIAN MODIFIER LETTER LEFT HALF RING;Lm;0;L;;;;;N;;;;;  
06E5;ARABIC SMALL WAW;Lm;0;AL;;;;;N;;;;;  
07FA;NKO LAJANYALAN;Lm;0;R;;;;;N;;;;;  
1C7A;OL CHIKI MU-GAAHLAA TTUDDAAG;Lm;0;L;;;;;N;;;;;
```

Following 0970 DEVANAGARI ABBREVIATION SIGN, YUPI has been assigned a General Category of “Po” (Other_Punctuation).

3.6.1 Difference between Sign Anusvara <°> and Sign Tonpi <_>

SIGN ANUSVARA <°> is used to denote *n* [n] and *ɳ* [ɳ] phonemes. In Devanagari it corresponds to *anusvara* U+0902 (see Fig. 2). For examples: **ମାନାକ୍ଳେ** *Māñāklen* ‘Tomorrow’, **ମାନସାଵା** *Mānsāwā* ‘Bless’ and **ପଞ୍ଚାୟେ** *Pancāyet* ‘Panchayat’, etc.

Nasalization mark [~] is denoted by SIGN TONPI <_> in the script (see Fig. 2). It corresponds in Devanagari to *candrabindu* U+0901. For example: **ଚୋବା** *Chōwā* ‘Bird’, **ସାସାଵା** *Yāsāwā* ‘Curse’ and **ଚେଇଵା** *Chēiwā* ‘Brother’.

See Fig. 2, 18a, 18b, 18c, 22, 28.

3.6.2 Sign Visarga <°>

Glottal Stop [?] phoneme of the script is represented by SIGN VISARGA <>. It is denoted in Devanagari by *visarga* U+0903. The Glottal stop is sometimes shown by <়> instead of <°> (see Fig. 2, 17e, 27). For example: **ଜାତାରା** or **ଜାତାରା** *Cā?wā* ‘Water’, **ତାରା** or **ତାରା** *Ā?wā* ‘Oil’ and **ମାରା** or **ମାରା** *Mā?wā* ‘Black Bird’ etc.

3.6.3 Difference between Sign Virama <_> and Sign Saat <_>

Both the signs are used to mute the inherent vowel sound. There is no regular form of conjunctions or geminated letter in the script. SIGN SAAT <_> is only used to mute the inherent vowel of the first letter of the word; all other places are represented by SIGN VIRAMA <>. Both the signs are represented in Devanagari by *virama* U+094D. For example: **ଭ୍ୟାକ୍ସିନ** *Bhyāksin* ‘Vaccine’, **ହ୍ୟାନି** *Hyānī* ‘There’, **ହ୍ୟୁନି** *Hyuni* ‘Down’, **ମ୍ୟୁମା** *Mhumā* ‘Quarrel’ **ଶୁଷ୍ମିକ୍ଷିମ** *Sukhkhim* ‘Sikkim’, **ଅନ୍କା** *Ankā* ‘Me’ and **ଖାତ୍ମା** *Khātmā* ‘To go’, etc.

See Fig. 17a, 17b, 17c, 22.

3.6.4 Sign YUPI <_>

Sign YUPI is used to make abbreviations in Bantawa language (see Fig. 17d, 19b, 19c, 19d). For example: **ଡ଼.** is for ‘Dr.’ (Doctor), **ଡ଼.ପ୍ରେସା** is for ‘D.G.P.’ (Director General of Police), etc.

In legacy encodings SIGN YUPI was sometimes used with VOWEL SIGN U to form VOWEL SIGN UE <ଉ> (see Fig. 1 and 6). Since this is an abbreviation sign, using SIGN YUPI with VOWEL SIGN U to form VOWEL SIGN UE is not acceptable.

3.7 Punctuation

Kirat Rai uses DANDA </> and DOUBLE DANDA <//> at the end of the sentence (see Fig.13, 16, 21, 22). Many Indic scripts use the *danda* and *double danda* from the Devanagari block. The Kirat Rai *danda* and *double danda* are used in a similar way to how they are used in Devanagari. However, in order to visually differentiate the *danda* from KIRAT RAI VOWEL SIGN AA <>, these are always slanted in Kirat Rai. Thus, these are proposed for encoding in the Kirat Rai block.

Kirat Rai *sign Chamri* <-> is typically used to join two different words to form compound term (see Fig. 15 and 16). It should be unified with the corresponding HYPHEN-MINUS U+002D. For example: ི𠀠-𠀠 ‘Sāyā-Bun’ Turban, etc. There are no other script-specific punctuation marks.

The following “Latin” marks are used:

. , ; : ? ! :- _ \ * ‘ ’ ” () { } [] <>

3.8 Digits

There is a full set of decimal digits: ୦ ZERO, ୧ ONE, ୨ TWO, ୩ THREE, ୪ FOUR, ୫ FIVE, ୬ SIX, ୭ SEVEN, ୮ EIGHT, ୯ NINE (see Fig. 5a, 7, 8, 10, 11, 13, 22, 23).

4 Collation

Nasalized vowels should come before the corresponding non-nasalized vowel (and before any other consonant). An example (fictional) of how words should sort is as follows:

- a. କାଳି
- b. କାଳି
- c. କାଳିତା
- d. କାଳିରେତା
- e. କାଳି
- f. କାଳିରେ
- g. କାଳିରେ
- h. କାଳି
- i. କାଳି

This sort order with *anusvara*, *tonpi*, and *visarga* sorting first has been approved by AKRS.

The collation order is as follows:

• ANUSVARA < ୦ TONPI < ୧ VISARGA < ୨ A < ୩ KA < ୪ KHA < ୫ GA < ୬ GHA < ୭ NGA < ୮ CA < ୯ CHA < ୩ JA < ୧ JHA < ୨ NYA < ୪ TTA < ୫ TTHA < ୩ DDA < ୪ DDHA < ୧ TA < ୫ THA < ୬ DA < ୭ DHA < ୮ NA < ୨ PA < ୪ PHA < ୧ BA < ୩ BHA < ୫ MA < ୧ YA < ୣ RA < ୧ LA < ୫ VA < ୩ SA < ୧ SHA < ୨ HA < ୫ AA < ୧ I < ୧ U < ୧ UE < ୧ E < ୧ AI < ୧ O < ୧ AU < ୧ VIRAMA < ୧ SAAT < ୧ YUPI / ୧ DANDA < // DOUBLE DANDA < ୦ DIGIT ZERO < ୧ DIGIT ONE < ୨ DIGIT TWO < ୩ DIGIT THREE < ୪ DIGIT FOUR < ୫ DIGIT FIVE < ୬ DIGIT SIX < ୭ DIGIT SEVEN < ୮ DIGIT EIGHT < ୯ DIGIT NINE

4.1 Default Unicode Collation Element Table

Contractions will automatically be added to the UCA because of canonical decompositions for AI, O and AU.

```
16D67 16D67 ; ... # KIRAT RAI VOWEL SIGN AI
16D63 16D67 ; ... # KIRAT RAI VOWEL SIGN O
16D63 16D67 16D67 ; ... # KIRAT RAI VOWEL SIGN AU
16D69 16D67; ... # KIRAT RAI VOWEL SIGN AU
16D63 16D68; ... # KIRAT RAI VOWEL SIGN AU
```

5 Character Data

5.1 Character Properties

In the format of UnicodeData.txt:

```
16D40;KIRAT RAI SIGN ANUSVARA;Lm;0;L;;;;N;;;;;
16D41;KIRAT RAI SIGN TONPI;Lm;0;L;;;;N;;;;;
16D42;KIRAT RAI SIGN VISARGA;Lm;0;L;;;;N;;;;;
16D43;KIRAT RAI LETTER A;Lo;0;L;;;;N;;;;;
16D44;KIRAT RAI LETTER KA;Lo;0;L;;;;N;;;;;
16D45;KIRAT RAI LETTER KHA;Lo;0;L;;;;N;;;;;
16D46;KIRAT RAI LETTER GA;Lo;0;L;;;;N;;;;;
16D47;KIRAT RAI LETTER GHA;Lo;0;L;;;;N;;;;;
16D48;KIRAT RAI LETTER NGA;Lo;0;L;;;;N;;;;;
16D49;KIRAT RAI LETTER CA;Lo;0;L;;;;N;;;;;
16D4A;KIRAT RAI LETTER CHA;Lo;0;L;;;;N;;;;;
16D4B;KIRAT RAI LETTER JA;Lo;0;L;;;;N;;;;;
16D4C;KIRAT RAI LETTER JHA;Lo;0;L;;;;N;;;;;
16D4D;KIRAT RAI LETTER NYA;Lo;0;L;;;;N;;;;;
16D4E;KIRAT RAI LETTER TTA;Lo;0;L;;;;N;;;;;
16D4F;KIRAT RAI LETTER TTHA;Lo;0;L;;;;N;;;;;
16D50;KIRAT RAI LETTER DDA;Lo;0;L;;;;N;;;;;
16D51;KIRAT RAI LETTER DDHA;Lo;0;L;;;;N;;;;;
16D52;KIRAT RAI LETTER TA;Lo;0;L;;;;N;;;;;
16D53;KIRAT RAI LETTER THA;Lo;0;L;;;;N;;;;;
16D54;KIRAT RAI LETTER DA;Lo;0;L;;;;N;;;;;
16D55;KIRAT RAI LETTER DHA;Lo;0;L;;;;N;;;;;
16D56;KIRAT RAI LETTER NA;Lo;0;L;;;;N;;;;;
16D57;KIRAT RAI LETTER PA;Lo;0;L;;;;N;;;;;
16D58;KIRAT RAI LETTER PHA;Lo;0;L;;;;N;;;;;
16D59;KIRAT RAI LETTER BA;Lo;0;L;;;;N;;;;;
16D5A;KIRAT RAI LETTER BHA;Lo;0;L;;;;N;;;;;
16D5B;KIRAT RAI LETTER MA;Lo;0;L;;;;N;;;;;
16D5C;KIRAT RAI LETTER YA;Lo;0;L;;;;N;;;;;
16D5D;KIRAT RAI LETTER RA;Lo;0;L;;;;N;;;;;
16D5E;KIRAT RAI LETTER LA;Lo;0;L;;;;N;;;;;
16D5F;KIRAT RAI LETTER VA;Lo;0;L;;;;N;;;;;
16D60;KIRAT RAI LETTER SA;Lo;0;L;;;;N;;;;;
16D61;KIRAT RAI LETTER SHA;Lo;0;L;;;;N;;;;;
16D62;KIRAT RAI LETTER HA;Lo;0;L;;;;N;;;;;
16D63;KIRAT RAI VOWEL SIGN AA;Lo;0;L;;;;N;;;;;
16D64;KIRAT RAI VOWEL SIGN I;Lo;0;L;;;;N;;;;;
16D65;KIRAT RAI VOWEL SIGN U;Lo;0;L;;;;N;;;;;
16D66;KIRAT RAI VOWEL SIGN UE;Lo;0;L;;;;N;;;;;
16D67;KIRAT RAI VOWEL SIGN E;Lo;0;L;;;;N;;;;;
16D68;KIRAT RAI VOWEL SIGN AI;Lo;0;L;16D67 16D67;;;N;;;;;
16D69;KIRAT RAI VOWEL SIGN O;Lo;0;L;16D63 16D67;;;N;;;;;
16D6A;KIRAT RAI VOWEL SIGN AU;Lo;0;L;16D69 16D67;;;N;;;;;
16D6B;KIRAT RAI SIGN VIRAMA;Lm;0;L;;;;N;;;;;
16D6C;KIRAT RAI SIGN SAAT;Lm;0;L;;;;N;;;;;
16D6D;KIRAT RAI SIGN YUPI;Po;0;L;;;;N;;;;;
16D6E;KIRAT RAI DANDA;Po;0;L;;;;N;;;;;
16D6F;KIRAT RAI DOUBLE DANDA;Po;0;L;;;;N;;;;;
16D70;KIRAT RAI DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
16D71;KIRAT RAI DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
16D72;KIRAT RAI DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
16D73;KIRAT RAI DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
16D74;KIRAT RAI DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
16D75;KIRAT RAI DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
16D76;KIRAT RAI DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
16D77;KIRAT RAI DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
16D78;KIRAT RAI DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
16D79;KIRAT RAI DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
```

5.2 Linebreaking

In the format of LineBreak.txt:

```
16D40..16D42 ; AL # [03] KIRAT RAI SIGN ANUSVARA .. KIRAT RAI SIGN VISARGA
16D43..16D62 ; AL # [32] KIRAT RAI LETTER A .. KIRAT RAI LETTER HA
16D63..16D6A ; AL # [08] KIRAT RAI VOWEL SIGN AA .. KIRAT RAI VOWEL SIGN AU
16D6B..16D6D ; AL # [03] KIRAT RAI SIGN VIRAMA .. KIRAT RAI SIGN YUPI
16D6E..16D6F ; BA # [02] KIRAT RAI DANDA.. KIRAT RAI DOUBLE DANDA
16D70..16D79 ; NU # [10] KIRAT RAI DIGIT ZERO .. KIRAT RAI DIGIT NINE
```

5.3 'Confusable' Characters

Below is a list of Kirat Rai characters that are 'confusable' with those encoded in other script blocks:

16D40 KIRAT RAI SIGN ANUSVARA	;	00B0	DEGREE SIGN
		02DA	RING ABOVE
16D42 KIRAT RAI SIGN VISARGA	;	0983	BENGALI SIGN VISARGA
		A789	MODIFIER LETTER COLON
16D4B KIRAT RAI LETTER JA	;	11088	KAITHI LETTER UU
16D4E KIRAT RAI LETTER TTA	;	096A	DEVANAGARI DIGIT FOUR
16D50 KIRAT RAI LETTER DDA	;	0909	DEVANAGARI LETTER U
16D52 KIRAT RAI LETTER TA	;	1109E	KAITHI LETTER TA
16D5C KIRAT RAI LETTER YA	;	0A9A	GUJARATI LETTER CA
16D63 KIRAT RAI VOWEL SIGN AA	;	0B3E	ORIYA VOWEL SIGN AA
		007C	VERTICAL LINE
		0964	DEVANAGARI DANDA
16D6B KIRAT RAI SIGN VIRAMA		02CD	MODIFIER LETTER LOW MACRON
16D6C KIRAT RAI SIGN SAAT	;	02F0	MODIFIER LETTER LOW UP ARROWHEAD
16D6D KIRAT RAI SIGN YUPI	;	02F3	MODIFIER LETTER LOW RING
		0970	DEVANAGARI ABBREVIATION SIGN
16D6E KIRAT RAI DANDA	;	2215	DIVISON SLASH
16D70 KIRAT RAI DIGIT ZERO	;	0030	DIGIT ZERO

5.4 Script Metadata

Script_Metadata

Name	Kirat Rai
Size	58
Origin Country	India
Density	1
Likely language	Bantawa
Lang_Code	bap
ID Usage	Limited Use
RTL?	No
LB letters?	No
Shaping req?	No
IME?	No
Case?	No

	16D4	16D5	16D6	16D7
0	▫	ੳ	ੜ	੦
1	▫-	ੜ	॥ਲ	ੴ
2	▫▫	੧	੩	੨
3	ਊ	ਊ	।	ਊ
4	ਊ	ਈ	ਾ	ਐ
5	ਊ	ਊ	ਊ	ਊ
6	ਊ	ਊ	ਊ	ਊ
7	ਊ	ਊ	ਊ	ਊ
8	ਊ	ਊ	ਊ	ਊ
9	ਊ	ਊ	ਊ	ਊ
A	ਊ	ਊ	ਊ	
B	ਊ	ਊ	-	
C	ਊ	ਊ	^	
D	ਊ	ਊ	▫	
E	ਊ	ਊ	/	
F	ਊ	ਊ	//	

Various signs

- 16D40 ° KIRAT RAI SIGN ANUSVARA
→ 02DA ° ring above
16D41 ° KIRAT RAI SIGN TONPI
16D42 ° KIRAT RAI SIGN VISARGA
→ A789 : modifier letter colon

Letters

- 16D43 ፩ KIRAT RAI LETTER A
• also used as a vowel carrier
16D44 ፪ KIRAT RAI LETTER KA
16D45 ፫ KIRAT RAI LETTER KHA
16D46 ፬ KIRAT RAI LETTER GA
16D47 ፭ KIRAT RAI LETTER GHA
16D48 ፮ KIRAT RAI LETTER NGA
16D49 ፯ KIRAT RAI LETTER CA
16D4A ፱ KIRAT RAI LETTER CHA
16D4B ፲ KIRAT RAI LETTER JA
16D4C ፳ KIRAT RAI LETTER JHA
16D4D ፴ KIRAT RAI LETTER NYA
16D4E ፵ KIRAT RAI LETTER TTA
16D4F ፶ KIRAT RAI LETTER TTJA
16D50 ፷ KIRAT RAI LETTER DDA
16D51 ፸ KIRAT RAI LETTER DDHA
16D52 ፹ KIRAT RAI LETTER TA
16D53 ፻ KIRAT RAI LETTER THA
16D54 ፼ KIRAT RAI LETTER DA
16D55 ፽ KIRAT RAI LETTER DHA
16D56 ፾ KIRAT RAI LETTER NA
16D57 ፿ KIRAT RAI LETTER PA
16D58 ፻ KIRAT RAI LETTER PHA
16D59 ፻ KIRAT RAI LETTER BA
16D5A ፻ KIRAT RAI LETTER BHA
16D5B ፻ KIRAT RAI LETTER MA
16D5C ፻ KIRAT RAI LETTER YA
16D5D ፻ KIRAT RAI LETTER RA
16D5E ፻ KIRAT RAI LETTER LA
16D5F ፻ KIRAT RAI LETTER VA
16D60 ፻ KIRAT RAI LETTER SA
16D61 ፻ KIRAT RAI LETTER SHA
16D62 ፻ KIRAT RAI LETTER HA

Vowel signs

- 16D63 । KIRAT RAI VOWEL SIGN AA
→ 007C | vertical line
→ 0964 । devanagari danda
16D64 ঁ KIRAT RAI VOWEL SIGN I
16D65 ঁ KIRAT RAI VOWEL SIGN U
16D66 ঁ KIRAT RAI VOWEL SIGN UE
16D67 ঁ KIRAT RAI VOWEL SIGN E
16D68 ঁ KIRAT RAI VOWEL SIGN AI
≡ 16D67 ঁ 16D67 ঁ
16D69 ।ঁ KIRAT RAI VOWEL SIGN O
≡ 16D63 । 16D67 ঁ
16D6A ।ঁ KIRAT RAI VOWEL SIGN AU
≡ 16D69 ।ঁ 16D67 ঁ

Various signs

- 16D6B । KIRAT RAI SIGN VIRAMA
→ 02CD । modifier letter low macron
16D6C । KIRAT RAI SIGN SAAT
→ 02F0 । modifier letter low up arrowhead

16D6D • KIRAT RAI SIGN YUPI

- intended for Kirat Rai-specific abbreviations
- 02F3 ° modifier letter low ring
- 0970 ° devanagari abbreviation sign

Punctuation

- 16D6E / KIRAT RAI DANDA
= danda
→ 0964 । devanagari danda
16D6F // KIRAT RAI DOUBLE DANDA
= double danda
→ 0965 ॥ devanagari double danda

Digits

- 16D70 ০ KIRAT RAI DIGIT ZERO
16D71 ১ KIRAT RAI DIGIT ONE
16D72 ২ KIRAT RAI DIGIT TWO
16D73 ৩ KIRAT RAI DIGIT THREE
16D74 ৪ KIRAT RAI DIGIT FOUR
16D75 ৫ KIRAT RAI DIGIT FIVE
16D76 ৬ KIRAT RAI DIGIT SIX
16D77 ৭ KIRAT RAI DIGIT SEVEN
16D78 ৮ KIRAT RAI DIGIT EIGHT
16D79 ৯ KIRAT RAI DIGIT NINE

6 Letter of Support from Akhil Kirat Rai Sangh Sikkim (AKRS)



AKHIL KIRAT RAI SANGH SIKKIM

HEAD OFFICE: GANGTOK

Branch Office:

Hotel Khambawan Building, Central Park Namchi
Regd. No, 443/1990

Ref. No. 06/AKRSS/2021

Date: 21/07/2021

To

Dr. Deborah Anderson
Unicode Technical Director,
Unicode Technical Committee
USA

Sub:- Background of Kirat Rai script and Supporting Letter for Kirat Rai script in UCS reg:-

Respected Madam,

About Kirat Rai language and official status: Kirat is a sub-group of Sino-Tibetan family. It has Limbus and Rais. Kirat Rai language also known as Bantawa or Rai language. People from ancient Khambawan region considered as Khambu Rai. Khambu Rai people having a common surname as Rai. Khambu Rai having 26-28 dialects like Bantawa, Khulung, Chambling, Yakkha, Khaling etc. Bantawa dialect considered as standard language for Khambu Rais. After getting official status Bantawa called as Kirat Rai or Rai language. In 1995, Kirat Rai language get official status in Sikkim and AKRS declared Kirat Rai script for Kirat Rai language in 1998. Script of Limbus and Kirat Rais derived from Old Kiranti script. Limbu script or Sirijonga Lipi previously known as Kirati Lipi.

About Kirat Rai script:- Kirat Rai script was invented by late Mahaguru Tika Ram Rai resident of Daragaon, Darjeeling, West Bengal a century ago. He wrote Simhung (Rai religious book), It is derived from Old Kiranti Lipi. That time this script called as Sumhung Lipi. Later on, in 1969 late Guru Kripasalyan Rai reintroduced this script through his "Rai Aksharko Barnamala" book. This script again rewrite and reshaped in 1999 by Late B.B.Rai of Tikpur the script as a 'Khambu Rai script' as per L2/11-105. Due to printing reason and other font issues a committee under B.B.Rai they started to reshape and modified the all the letters and Glyphs. They removed all the unnecessary letters those are not required as per Rai (Bantawa) phonology. They changed the all the diacritic marks and added Chak (Virama), Saat, Chwa (Anusvara), Tonpi, Laisom (Visarga), Yupi and Chomri (Hyphen). They set Letter SA before letter SHA. They removed letters vocalic R, vocalic RR, NNA, SSA, RRA, RHA, Ligature: KSHA, TRA, GYA. They added a new letter UE in vowel

P.T.O. —→



AKHIL KIRAT RAI SANGH SIKKIM

HEAD OFFICE: GANGTOK

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Regd. No. 443/1990

Ref. No. 06/AKRSS/2021

Date: 21/07/2021

Cont.: Page 1

section. And they named this script as Kirat Rai script. Govt. of Sikkim officially registered this script as Kirat Rai script.

Now a days we are using current Kirat Rai script. Kripasalyan's Khambu Rai is not using anymore and there is no chance to use Khambu Rai script again. And we are assuring that Kirat Rai script will not revised in future. Our humble request to you and your committee to encode our Kirat Rai script in Unicode and approved by UTC. We are Kirat Rai people is looking for your support.

Thanking you

Yours sincerely

(Chandra Khaling)

President

Akhil Kirat Rai Sangh Sikkim

7 Tables

A	B	C	D	IPA	A	B	C	D	IPA
ଙ୍ଗ	ଙ୍ଗ	ଙ୍ଗ	ଅ	/a/	ନ୍ଦ୍ର	ନ୍ଦ୍ର	ନ୍ଦ୍ର	କ	/ka/
ଆ	ତେଁ	ତେଁ	ଆ	/a:/	ଶ୍ରୀ	ଶ୍ରୀ	ଶ୍ରୀ	ଖ	/kʰa/
ା	୦୧	।	ା		ଲ୍ଲା	ଲ୍ଲା	ଲ୍ଲା	ଗ	/ga/
ଇ	ଇ	ଇଲ୍ଲା	ଇ	/i/	ଭ୍ରମ	ଭ୍ରମ	ଭ୍ରମ	ଘ	/gʰa/
ି	ି	ିଲ୍ଲା	ି		ହ୍ରଙ୍ଗ	ହ୍ରଙ୍ଗ	ହ୍ରଙ୍ଗ	ଙ୍ଗ	/ŋa/
ଈ	ଈ	-	ଈ	/i:/	ବ୍ରାମ	ବ୍ରାମ	ବ୍ରାମ	ଚ	/ca,tsa/
ୀ	ୀ	-	ୀ		ପ୍ରାମ	ପ୍ରାମ	ପ୍ରାମ	ଛ	/cʰa,tsʰa/
ଙ୍କ	ଙ୍କ	ଙ୍କଳୁ	ଉ	/u/	ଜ୍ଵାମ	ଜ୍ଵାମ	ଜ୍ଵାମ	ଜ	/dza/
ୁ	ୁ	ୁଲୁ	ୁ		ଦ୍ଵାମ	ଦ୍ଵାମ	ଦ୍ଵାମ	ଦ୍ଵାମ	/dzʰa/
ଙ୍କ	ଙ୍କ	-	ଙ୍କ	/u:/	ନ୍ଦ୍ରାମ	ନ୍ଦ୍ରାମ	ନ୍ଦ୍ରାମ	ନ୍ଦ୍ରାମ	/na/
ୁ	ୁ	-	ୁ		ଟ୍ରାମ	ଟ୍ରାମ	ଟ୍ରାମ	ଟ୍ରାମ	/ta/
ଶୁ	ଶୁ	-	ଶୁ	/ri/	ଟ୍ରାନ୍ସ	ଟ୍ରାନ୍ସ	ଟ୍ରାନ୍ସ	ଟ୍ରାନ୍ସ	/tʰa/
ୁ	ୁ	-	ୁ		ଡ୍ରାମ	ଡ୍ରାମ	ଡ୍ରାମ	ଡ୍ରାମ	/dʒa/
ଶୁ	ଶୁ	-	ଶୁ	/ri:/	ଫ୍ରାନ୍ତି	ଫ୍ରାନ୍ତି	ଫ୍ରାନ୍ତି	ଫ୍ରାନ୍ତି	/dʰa/
ୁ	ୁ	-	ୁ		ଫ୍ରାନ୍ତି	ଫ୍ରାନ୍ତି	ଫ୍ରାନ୍ତି	ଫ୍ରାନ୍ତି	/ŋa/
-	-	ଶୁଣୁ	ଉ	/i/	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ta/
-	-	ଉ	-		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/tʰa/
ପ୍ରୁ	ପ୍ରୁ	ପ୍ରୁଣୁ	ଏ	/e/	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/da/
ୁ	ୁ	ୁଣୁ	େ		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/dʰa/
ପ୍ରେ	ପ୍ରେ	ପ୍ରେଣ୍ଟିଂ	ଏସ୍	/ɛ/	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/na/
ୁ	ୁ	ୁଣ୍ଟିଂ	େସ୍		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/pa/
ଓଁ	ଓଁ	ଓଁନ୍ଟିଂ	ଓଁ	/o/	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/pʰa/
ୋ	ୋ	ୋନ୍ଟିଂ	ଠୋ		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ba/
ଔଁ	ଔଁ	ଔଁନ୍ଟିଂ	ଓଁ	/au/	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/bʰa/
ୌଁ	ୌଁ	ୌଁନ୍ଟିଂ	ଠୌଁ		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ma/
-	-	.	.		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ja/
-	-	-	-		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ra/
୦	୦	-	-		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/la/
-	-	ା	ା		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/wa/
୦	୦	୦	୦		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ʃa/
୦୦	୦୦	୦୦	୦୦		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ʂa/
-	-	ା	ା		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/sa/
୦	୦	୦	୦		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ନ୍ତି
୦୦	୦୦	୦୦	୦୦		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ତା/
-	-	ା	ା		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/tʰa/
୦	୦	୦	୦		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/କ୍ଷା/
୦୦	୦୦	୦୦	୦୦		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ରା/
-	-	ା	ା		ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	ମ୍ରାନ୍ତି	/ଗ୍ରା/

Table 3: Comparison table of Kripasalyan Lipi (1969) in column 'A', Khambu Rai (1999) in column 'B', Kirat Rai (2000) in column 'C', and Devanagari in column 'D'. See Fig. 29, 30, 31.

<i>A</i>	<i>B</i>	<i>A</i>	<i>B</i>	<i>A</i>	<i>B</i>
ଙ	ଙ	ଙ	ଙ	ର୍	ର୍ୟ
କ୍ର	କ୍ର	ପ୍ର	ପ୍ର	ର୍ର୍	ର୍ର୍ୟ
ଫ୍ଲ	ଫ୍ଲ	ଫ୍ଲ	ଫ୍ଲ	-	-
ଜ୍ଞ	ଜ୍ଞ	ର୍ମ	ର୍ମ	୦	୦
ଶ	ଶ	ର୍ମ	ର୍ମ	୧	-
ତ୍ର	ତ୍ର	ନ୍ମ	ନ୍ମ	୨	୨
ଚ	ଚ	ର୍ମ୍	ର୍ମ୍	୩	-
ଶ୍ଵ	ଶ୍ଵ	ର୍ମ୍ୟ	ର୍ମ୍ୟ	୪	-
ର୍ମ	ର୍ମ	ର୍ମ୍ୟ	ର୍ମ୍ୟ	୫	-
ମ୍ର	ମ୍ର	ପ୍ର୍	ପ୍ର୍	୦	୦
ର୍ମ୍ର	ର୍ମ୍ର	ର୍ମ୍ର	ର୍ମ୍ର	୨	୬
ର୍ମ୍ର୍	-	ର୍ମ୍ର୍	ର୍ମ୍ର୍	୨	୮
ର୍ମ୍ର୍ୟ	-	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	୩	୯
ର୍ମ୍ର୍ୟ	-	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	୨	୯
ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	୮	୮
ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	୨	୧
ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	ର୍ମ୍ର୍ୟ	୧	୭

Table 4: Comparison table of Kirat Rai in column ‘A’ and Limbu in column ‘B’.

8 Figures

ରାଈ ଶାମାରୀ RAI ALPHABET

ରାଈ ଭାଷାମା ନେପାଲୀ, ହିନ୍ଦୀ, ସଂସ୍କୃତ ଭାଷାସରହ
ଦୁଇ ପ୍ରକାରକା ଲିପି ପାଇନ୍ଛନ୍।

୧/ ଝାର୍ପିଖାପ (ହୋପଛାପ) : ସ୍ଵର-ବର୍ଣ୍ଣ (vowels)

୨/ ଧାର୍ମିଖାପ (ଚାଇଛାପ) : ବ୍ୟଜନ-ବର୍ଣ୍ଣ (consonants)

ଝାର୍ପିଖାପ (ହୋପଛାପ) ୯ ବଟା ହୁନ୍ତନ୍।

ଝ ଅ	ଝା ଆ	ଝାଇ ଇ/ଈ
ଝି ଉ/ଊ	ଝାଇ ଉ	ଝାଇଁ ଏ
ଝାଇଁ ଏ	ଝାଇଁ ଓ	ଝାଇଁ ଓଁ

Figure 1: Vowels of Kirat Rai (Rai Alphabet) from ରାଈ ଶାମାରୀ Sumhuin Chāmārī (ସୁମହୁଙ୍ଗ ଛାମାରୀ), Sandiwa (5:2000)

ੴ॥੯ = ਭ ਔਛਾਪ = ਭੌ = ੯ (ਨੌ ਅੜਕ)

ੴ॥੧੦ = ਪ ਔਛਾਪ = ਪੌ = ੧੦ (ਦਸ ਅੜਕ)

(-) = ਚਰ੍ਹ = ਚਕ੍ - ਦੁਇ ਬੇਗਲਾ ਬੇਗਲੈ ਅਕ਼ਰਹਣ ਜੋਡੇਰ ਏਤਟਾ ਸ਼ਬਦ
ਬਨਾਉਂਦਾ ਪ੍ਰਯੋਗ ਗਰਿਨੇ।

ਜਸਤੈ : ਮਾਰਾਨਾ = ਖਾਤਾਮਾ ਮਾਰਾ-ਨਾ = ਜਾਨੁ।

ਟਾਪ੍ਰਾਰੂੜ = ਸਾਧਾਬੁਡ = ਟਾਪ੍ਰਾ-ਰੂੜ = ਫੇਟਾ।

ਟਾਪ੍ਰਾ-ਹਾ-ਟਾਵ - ਸਾਪ੍ਰਵਾ-ਸੀਨ

੩।-	ਅ.	੩°	ਅੰ
੩°-	ਅੰ	੩°:	ਅ:
੩।੮	ਅ੮		

Figure 2: Various signs of Kirat Rai (SIGN YUPI not included) from ਟਾਪ੍ਰਾਰੂੜ ਜਾਮਾਰੀ Sumhuin Chāmārī (ਸੁਮਹੁਡ ਜਾਮਾਰੀ), Sandiwa (6:2000)

राई भाषामा व्यञ्जन-वर्ण ३१ वटा छन्।
 चाइच्छाप (चाइच्छाप) : व्यञ्जन-वर्ण (consonants)

କ	ଖ	ଗ	ଘ	ଡ
ଚ	ଛ	ଜ	ଝ	ଡ
ଟ	ଠ	ଡ	ଢ	ତ
ଥ	ଦ	ଧ	ନ	ପ
ଫ	ବ	ଭ	ମ	ୟ
ର	ଲ	ଵ	ସ	ଶ
		ହ		

Figure 3: Consonants of Kirat Rai (Rai Alphabet) from ੴ॥ਨਾਨਾ॥ Sumhuṇ Chāmārī (ਸुਮਹੁਣ ਚਾਮਾਰੀ), Sandiwa (6:2000)



Figure 4: Consonant chart of Kirat Rai (letter SHA not included), [courtesy: Human Resource Development Department, Govt. of Sikkim]

ଲମ୍ବା କୁଣ୍ଡ ହୀମାରୀ
କୁମ ହୁଙ୍କ ଛାମାରୀ

RAI ALPHABET

ରାଈ ବର୍ଣମାଳା

ଅ	ଆ	ଇ	ଉ
ଅ	ଆ	ଇ/ଈ	ଉ/ଊ
ଉ	ଏ	ଏ	ଏ
ଔ	ରୋ	ରୋ	ଓ
ଔ	ରୋ	ରୋ	ଓ
ଅଂ	ଅ	ଅଂ	ଅଂ
ଅଃ	ଅଃ	ଅଃ	ଅଃ
ଶାଖପୁଣ୍ୟପୁ		ହୋପଭାଷ	
ସ୍ଵରବର୍ଣ୍ଣ		VOWEL	
ଅନ୍ତିମ		ଅନ୍ତିମ - ସଂଖ୍ୟା	
NUMBERS			
୧	୨	୩	୪
ଅକ	ତୁଳ	ହଚା	ଚାନ୍ଦ
୫	୬	୭	୮
ଜା	ତୁଳ	ଗାର	ଏ
୯	୧୦	୧୧	୧୨
ଜା	ତୁଳ	ଗାର	ଏ
୦	୦	୦	୦
୧୫		୧୫	

Figure 5 (a): Chart of Kirat Rai vowels, signs and numerals (sign YUPI not included), [courtesy: West Bengal Khambu Rai Development Board, Darjeeling]



Figure 5(b): Chart of Kirat Rai (Rai Alphabet) consonants, [courtesy: West Bengal Khambu Rai Development Board, Darjeeling]

કાર્યાલયદા (Vowels)

આ	આઈ	આઉ	આઉ
આઈ	આઈ	આઈ	આઈ
આઉ			

કાર્યાલયદા (Consonants)

એ	એ	ઝ	ષ	શ
એ	એ	ઝ	ષ	
એ	એ	ઝ	ષ	
એ	એ	ઝ	ષ	શ
એ	એ	ઝ	ષ	શ
એ	એ	ઝ	ષ	
	એ	ઝ		

૫

Figure 6: Chart of Kirat Rai scripts (letter NYA and SHA not included) from કાઈ ચાપોપોન શિપરોયાંદ્રાં અન્યાં ચાપોપોન (Rai Language Text Book-I), Rai and Rai (5:2019)

TKN127

ଆ = । - ।	ଆହାଇଲ୍ଲା = ୳ - ୳
ବୁ = ଉ - ଉହାଇଲ୍ଲା	ବୋ = ଏ - ଏହାଇଲ୍ଲା
ବୀରୀ = ରୀ - ରାହାଇଲ୍ଲା	ବୀରୀ = ଇରୀ - ଇହାଇଲ୍ଲା
ବୀରୀରୀ = ରୀରୀ - ରାହାଇଲ୍ଲାରୀ	

ଶବ୍ଦପରିଚାରକ (Vowel Signs)

- = ରହ	^ = ଟାର
◦ = ରାହ	◦ = ରାହୁର
: = ରାହୁରାହ	

ଧାରା

ରାହୁରାହ-ରାହ-ରାହାଇଲ୍ଲା ରାହ ରାହ ରାହ ରାହ ରାହ ରାହ
 ରାହ ରାହ ରାହ ରାହ ରାହ ରାହ ରାହ ରାହ ରାହ ରାହ ରାହ

Figure 7: Signs of Kirat Rai scripts (sign YUPI not included) from ‘ରାଇକ ପ୍ରତ୍ୟୋଜନ ଶବ୍ଦପରିଚାରକ Rāi Yañ-o Chāpalāyāk ḍeṇḍiṭ-ṛāk-’ (Rai Language Text Book-II), Rai and Rai (28:2019)

ਕੰਤ੍ਰਿਯ (COUNTING)		
੦	ਨਾ	○
੧	ਇੱਕ	
੨	ਦੁਹੀ	
੩	ਤੂਹਾ	
੪	ਚਾਲ	
੫	ਚਾਲ	
੬	ਚਾਲ	
੭	ਚਾਲ	
੮	ਚਾਲ	
੯	ਚਾਲ	
੧੦	ਚਾਲ	

62

63

Figure 8: Digits of Kirat Rai scripts from ਗ੍ਰਾਮ ਚੜ੍ਹਾਰੀ ਅਧਿਕਾਰੀ ਅਤੇ ਚੱਪੋਪਚਾਨ ਅਨ ਯਾਨ-ਓ ਚਾਪਬੋਪਚਾਨ (Rai Language Text Book-I), Rai and Rai (62, 63:2019)



Figure 9: Wood sculpture of Kirat Rai script [posted in a Kirat Rai Facebook group].

ਕਾਨੂੰ ਵਾਲੀ (RAI ALPHABET)				
ਕਾਰਿਊਲਾ (VOWEL)				
ਾ	ਆ	ਾਏ	ਾਓ	ਾ
ਅ	ਆ	ਏ	ਓ	ਾ
ਾਉ	ਾਏ	ਏ	ਾਓ	ਾਏ
ਤ	ਏ	ਏ	ਓ	ਓ
		ਾਏਏ		ਾਏਏ
ਕਾਰੀਚਰ (CHARACTER)				
ਾ-	ਾ°	ਾ°	ਾ°	ਾ°
ਅ	ਅ	ਅ	ਅ	ਅ

ਕਾਨੂੰ ਲਾਪ (CONSONANT)				
ਕ	ਮ	ਗ	ਧ	ਤ
ਖ	ਲ	ਝ	ਝ	ਤ
ਤ	ਲ	ਤ	ਤ	ਤ
ਦ	ਟ	ਤ	ਤ	ਤ
ਨ	ਣ	ਨ	ਨ	ਨ
ਧ	ਠ	ਧ	ਧ	ਧ
ਤ	ਤ	ਤ	ਤ	ਤ
ਤ	ਤ	ਤ	ਤ	ਤ

ਕਾਨੂੰ ਲਾਪ (DIGITS)				
੧	੨	੩	੪	੫
(ਇੱਕ)	(ਤੁਝ)	(ਤੌਰ)	(ਚਾਰ)	(ਪੈਂਚ)
ਥਰੁ	ਥੂਲਾ	ਟਾਹਾ	ਲਾਡ	ਡੀ
੬	੭	੮	੯	੦
(ਤ੍ਰੇ)	(ਚਾਲ)	(ਅਠ)	(ਨੌ)	(ਜੂਦੇ)
ਥਾਨਕ	ਥੋ	ਥੋ	ਥੋਹੋ	ਥੋਹੋ

‘ਕੁਰਾਕਾ ਲਾਚੇਪ’

ਕੁਲਾਕਾ	ਕੁਲਾਕਾ

Figure 10: Handwritten form of Kirat Rai scripts from ਕਾਨੂੰ ਵਾਲੀ ਰਾਇ ਲਾਚੇਪ Rāī Chāmāri Lāchep (Rai Alphabet Book), AKRS (2003)

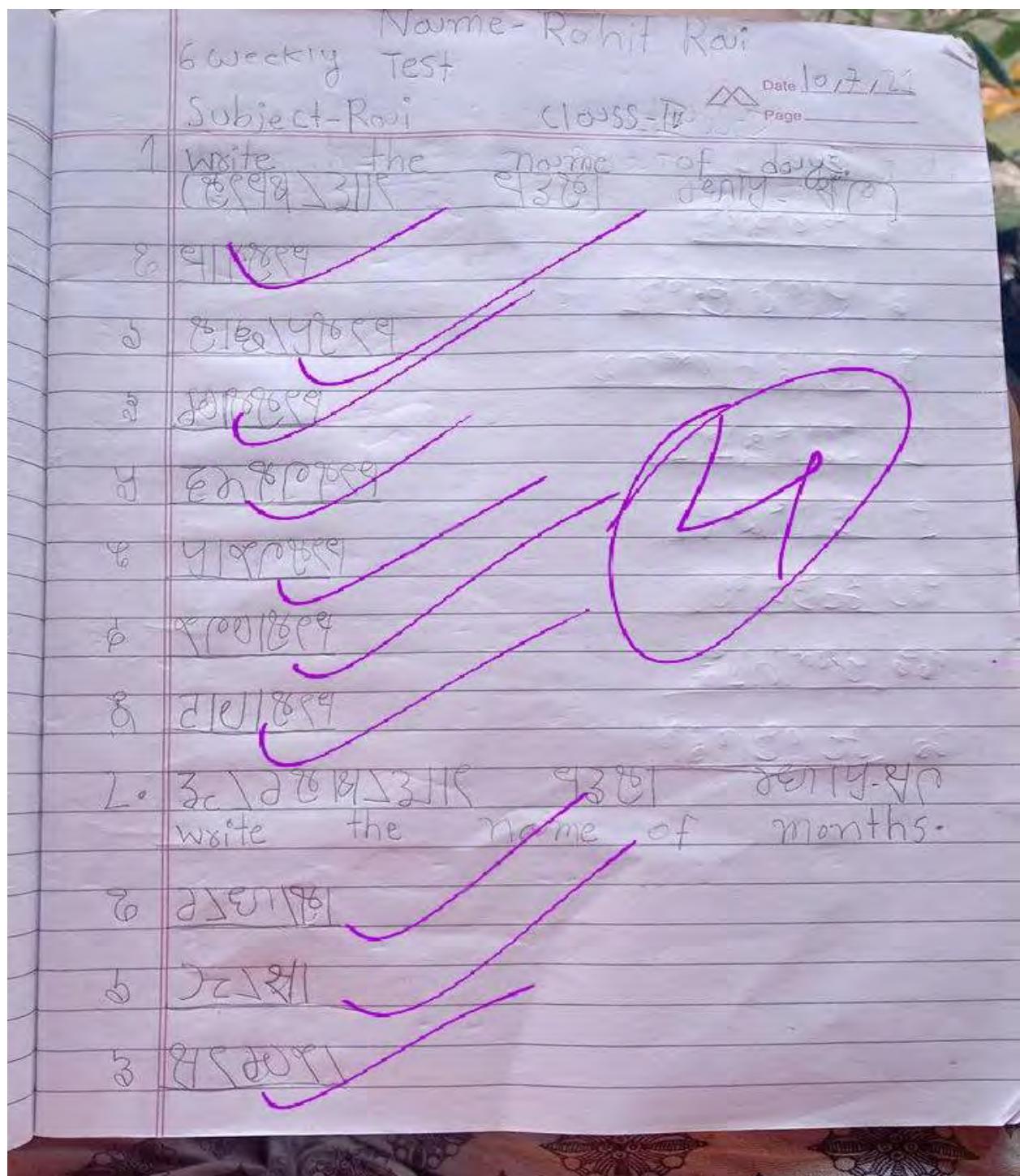


Figure 11: Digitally signed online class test note of a standard fourth student. [Source: B.B. Rokdung Rai]



Series JBB

SET-4

Code No. 58

Roll No.

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Candidates must write the Code on the title page of the answer-book.

6 ਨੂੰ ਜਾਣ ਵਾਲੇ ਹੋਰੇ ਦੀਆਂ ਗੱਲਿਆਂ ਵਿੱਚੋਂ ਇੱਕ, ਜੇਹੇ ਹੋਰੇ ਦੀਆਂ ਗੱਲਿਆਂ ਵਿੱਚੋਂ ਇੱਕ / ਜੇਹੇ ਹੋਰੇ ਦੀਆਂ ਗੱਲਿਆਂ ਵਿੱਚੋਂ ਇੱਕ ਸਾਰੇ ਆਪਣੇ ਪੜ੍ਹੇ ਵਿੱਚੋਂ ਇੱਕ / ਜੇਹੇ ਹੋਰੇ ਦੀਆਂ ਗੱਲਿਆਂ ਵਿੱਚੋਂ ਇੱਕ /

16 ਵਿੱਚੋਂ ਇੱਕ ਹੋਰੇ ਦੀਆਂ ਗੱਲਿਆਂ ਵਿੱਚੋਂ ਇੱਕ, ਜੇਹੇ ਹੋਰੇ ਦੀਆਂ ਗੱਲਿਆਂ ਵਿੱਚੋਂ ਇੱਕ / ਜੇਹੇ ਹੋਰੇ ਦੀਆਂ ਗੱਲਿਆਂ ਵਿੱਚੋਂ ਇੱਕ /

- Please check that this question paper contains 6 printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains 16 questions.
- Please write down the Serial Number of the question in the answer-book before attempting it.
- 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the students will read the question paper only and will not write any answer on the answer-book during this period.

RAI

Time allowed : 3 hours

Maximum Marks : 80

The question paper is divided into **four** sections :

Section A : Reading Comprehension	15 Marks
Section B : Composition (Writing)	25 Marks
Section C : Grammar	15 Marks
Section D : Literature	25 Marks

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P.T.O.

Figure 12: Front page of 'Rai' question paper in Kirat Rai script [courtesy: Central Board of Secondary Education]



Figure 14: A page from ‘नेपाली-राई चित्रमय शब्दकोश’ Nepālī-Rāī Citramay Śabdakoś, Rokdung (6:2019)

ନଗନ୍ଦାଳ - ୨୯ ଲାପିତ୍ୟର ଟାବଣୀ	
ଦାର୍ପନୀ = ପଦ୍ମ ଲାଗାନ୍ଦାଳ = ବିଜ୍ଞାନ ଟାବ- ଟାବ = ବିଧି ନଗନ୍ଦାଳ = ଅଧ୍ୟାତ୍ମ ଟାବନ୍ଦାଳଟାବ = ଅଧ୍ୟାପନ ଟାପିତ୍ୟାବ = ଧ୍ୱନି ଧର-ଧରକ = ସୂକ୍ଷମ ଉକ୍ତ = ଖଣ୍ଡ ଶାହିତ୍ୟରାଜ୍ୟ = ରେଖା ଚିତ୍ର ପ୍ରାନ୍ତିର = ସହ୍ୟୋଗ ଟକ୍କଟକ୍କାନ୍ତିର = ପୂର୍ଣ୍ଣ ଲାଗାନ୍ଦାଳପାନ୍ଦାଳ = ବିଦ୍ୱାନ ଶାନ୍ତିର = ପରିଵାର ଶାତଶାନ୍ତିର = ଉପ-ପରିଵାର ବାଚାକ = ବିକଲ୍ପ ଶାପଟବଶାପ = ଲେଖ୍ୟରୂପ ଟାପିଗଟାପ = ସ୍ଵର ଚିହ୍ନ ଟଗିନ୍ଦାଳ = ତରୀକା ଶାରୀରିକଟାପ = ଅପବାଦ ଶକ୍ତିଶାପ = ଏକାକ୍ଷରି ଟାବଶାପ = ଚିହ୍ନ କାତାର୍ଦି = ସଂଯୋଜକ ଧାନ୍ତିର = ଚଳନ ଶାପତାପଟାପ = ଲେଖ୍ୟରୂପ ଟାହାଯାତା = ସାହିତ୍ୟ ଟାନ୍ = ସ୍ତର ଟାଯାଟାନ୍ = ରିମା	ଟାବଶାପ = ପଦ୍ମଚିହ୍ନ ପାକାର୍ଦି = ଭୂମିକା ଶେଷପାନ୍ଦାଳାନ୍ଦାଳ = ଅନ୍ତରାଷ୍ଟ୍ରୀୟ ଧରତୀପରିତି = ପଦ୍ଧତି ଝାଙ୍ଗାଳ = ସ୍ଵର୍ଣ୍ଣ, ଆଫ୍ ଦାନ୍ତିନାଳ = ବିଶେଷତା ଅଶିଟେପଦାଳ = ରୂପମା ଶର୍ମକାରିଧାରକ = ଗଢ଼ୀ ଟାନ୍ = ଭେଦ ଅନ୍ତିର = ରୂପ ଧରତୀପରିତି = ବଚନ ମେଲ୍ପାଳିର = ସଂଖ୍ୟା ମେଲ୍ପଟାଳ = ହିସାବ ଶେଷଦାଳ = ବାର୍ତ୍ତାଲାପ ଦାନ୍ତିନାଳ = କାଳ ବାଚାକ = ଅଲଗ ଟାପିଗଟାପ = ବିଭକ୍ତି ଟଗିନ୍ଦାଳ = କାରଣ ଧାନ୍ତିର = ଫକ ବାର୍ତ୍ତାରୀ = ସାମାନ୍ୟ ଟାନ୍ତାର = ବାହେକ ବାଚାକ = ମହତ୍ତ୍ଵ ଥାର୍କାଧାର୍ଦାଳ କଟାପ = ସମ୍ବନ୍ଧକାରକ ଦେଇଟଗିନ୍ଦାଳନ୍ତାର = ନକାରାତମକ ଟାନ୍ତାରୀ = ସମ୍ଭାବନା କାନ୍ତାପାଲାଳ = ଅପ୍ରତ୍ୟକ୍ଷ ରୂପମା ଦାନ୍ତିନାଳ = ବିଶେଷତା
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Figure 15: A page from ଯାନ୍ତ ଶତାବ୍ଦୀ ଟାଟେପିତ୍ୟର ଟଗିନ୍ଦାଳ Raī Yañ-o Sāsenyai Sumsī Rai Grammar Book for class III, IV and V, Rai (46:2011)

ਮਨੁਸਕੋ-03

ਮਨੁਸਕ

ਪਿਤੇਪਾਨਾ

- ਰਾਖਾਂਦ ਪ੍ਰਚੰਕ ਟੁਪਕੜਾਂ ਵਿੜਾ



ਆਵਾਜ਼ੀ ਲਈ ਪਿਤੇਪਾਨਾ,
ਆਖ ਦੇਣ ਮਾਲੁਮ ਹੋਇਆ ਰਾਵਾ//
ਚਾਰੀ ਪਾਸ ਬੁਨ ਰਾਹਾ ਚਲ੍ਹਾਵੇ,
ਦੇਣ ਮਾਲੁਮ ਹੋਇਆ ਦਾਵਾ//

ਗੁਕਲੰਧ ਪਿਤੇਪਾ ਕੋਲੰਡ ਕੁਝਕਾ,
ਆਖੀ ਹਾਰ੍ਥਾ ਥੇਟਾ ਪ੍ਰਾਵਾ,
ਪਿਤੇਪਾ ਕੋਲੰਧਾ ਬਹੁਵਦ ਸਾਰੀ ਰਾਵਾ
ਲਈਆ ਤੇ ਦੇਣ ਆਖਕਾਬੁਜਾ ਮਾਵਾ//

ਗੁਣ ਗੁਣ ਰਾਖੀ ਨਾ ਟੁਪੁਪਾਈ,
ਆਖ ਨਿਵਾਨ ਚੁਕੀ ਨਿਵਾ ਮਾਵਾ//
ਪਿਤੇਪਾ ਜਾਂਤੀ ਪਿਤੇਪਾ ਜਾਂਤੀ ਜਾਂਤੀ,
ਆਵਾ ਪਾਵਾ ਨਿਜਾ ਤਰਾਵਾ//



ਆਵਾਜ਼ੀ ਸਾਰੰਧ ਚਤੀਆਂ ਦੂਨ,
ਆਖ ਪ੍ਰਾਵਾ ਦਾਵਾ//
ਪਿਤੇਪਾਨਾ ਕਣਾਵ ਮਾਵਾ ਤੁਕੁ ਨਾ,
ਆਵਾ ਨਿਵਰਾਨੀ ਤੁਕੁ ਨਿਵਰਾਨੀ ਜੇਹਾ//

Figure 16: It demonstrates use of **signs** and **punctuation** of Kirat Rai from ‘ਦਾਵਾ ਚੜ੍ਹਾਂ ਜਾਪਿਲਾਖਾਂ ਰਾਵਾ ਯਾਨ-ਓ ਚਾਪਲਾਯਾਕ ਮੁਲਾਕੁ-3’ (Rai Language Text Book-III), Rai and Rai (11:2019)



Figure 17(a): It shows the use and position of sign SAAT from ੳਾਇ ਚੰਡੀਅਰ ਜਾਪਰਾਪੁਅ.ਕੜ ਅਨ ਯਾਨ-ਓ ਚਾਪਬੋਪਕਾਨ (Rai Language Text Book-I), Rai and Rai (11:2019)



Figure 17(b): It shows the use and position of sign VIRAMA from ੳਾਇ ਚੰਡੀਅਰ ਜਾਪਰਾਪੁਅ.ਕੜ ਅਨ ਯਾਨ-ਓ ਚਾਪਬੋਪਕਾਨ (Rai Language Text Book-I), Rai and Rai (13:2019)

ਦੇਵੁੰਦ ਵੇਖੁੰਦ ਕੇਹਾ-ਏਧੁੰਦ, ਤਾਂਦੁੰਦ-

Figure 17(c): It shows the use and position of sign SAAT, VIRAMA and Chamri (Hyphen). [Courtesy: Sikkim Herald]

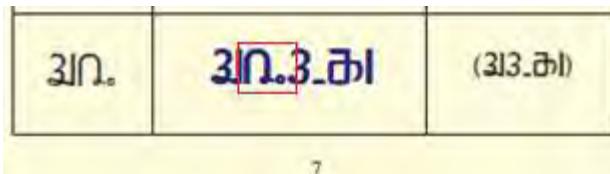


Figure 17(d): It shows the use and position of sign UE from ੳਾਇ ਚੰਡੀਅਰ ਜਾਪਰਾਪੁਅ.ਕੜ ਅਨ ਯਾਨ-ਓ ਚਾਪਬੋਪਕਾਨ (Rai Language Text Book-I), Rai and Rai (7:2019)



Figure 17 (e): It shows the use and position of sign VISARGA from ੳਾਇ ਚੰਡੀਅਰ ਜਾਪਰਾਪੁਅ.ਕੜ ਅਨ ਯਾਨ-ਓ ਚਾਪਬੋਪਕਾਨ (Rai Language Text Book-I), Rai and Rai (6:2019)

ਟਾਂਦੁੰਦ ਵੇਖੁੰਦ ਕੁਨ੍ਹਾ-ਏਧੁੰਦ-

Figure 18 (a): It shows the use and position of sign ANUSVARA as *ਾ*. [courtesy: Sikkim Herald]

ਥੁਨ੍ਹ ਪੁੰਝਾਰੁੰਹ ਘਿੰ

Figure 18(b): It shows the use and position of sign ANUSVARA as *n*. [courtesy: Sikkim Herald]



Figure 18(c): It shows the use and position of sign TONPI from ੳ.3 ଯାନ୍ ନୁମାକ୍ତମ (Rai Language Text Book-VIII), page no.42.

ରୀତିନାମୀ ୧୦.୩ ଆଏ ଥ
ଆଏ ଥାତା - ୩୦.୩କା ଥାଯାଇଥା ଥ
ରେ ରାତା ଆପ ମୁଦ୍ରାତା ୩୪.୬୯କ
ମୁହାରାତା ମୁଖ_ଥର-ମୁଖ_ଥର
୩ ତାତକର ଥାତାକର ଆମା ଆ
ୟ_୧୫ ମୁହୁ୪.୧୩ ଥାତ ? ମୁତା ର
ସକର ରାତାପା ଥାତ ଝର ରୀତା .

Figure 19 (a): It shows the use and position of sign YUPI as an alternative of UE from ੳ.3 ଯାନ୍ ନୁମାକ୍ତମ (Rai Language Text Book-VIII), page no.43.



Figure 19 (b): It shows the use and position of sign YUPI as an alternative of UE from cover of କିରାପା ରୀତିନାମୀ ଯାନ୍ ନୁମାକ୍ତମ (Rai Language Text Book-VII).

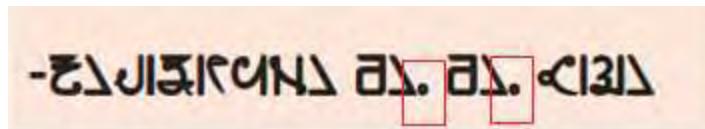


Figure 19 (c): It shows the use and position of sign YUPI as a punctuation mark from 'ରୀତିନାମୀ ଶିଖିଲାଯାକ Rāī Yañ-o Chāpalāyāk ମୁଦ୍ରଣକ-୩' (Rai Language Text Book-III), Rai and Rai (2019)



Figure 19 (d): It shows the use and position of sign YUPI as a punctuation mark. [Courtesy: Sikkim Herald]

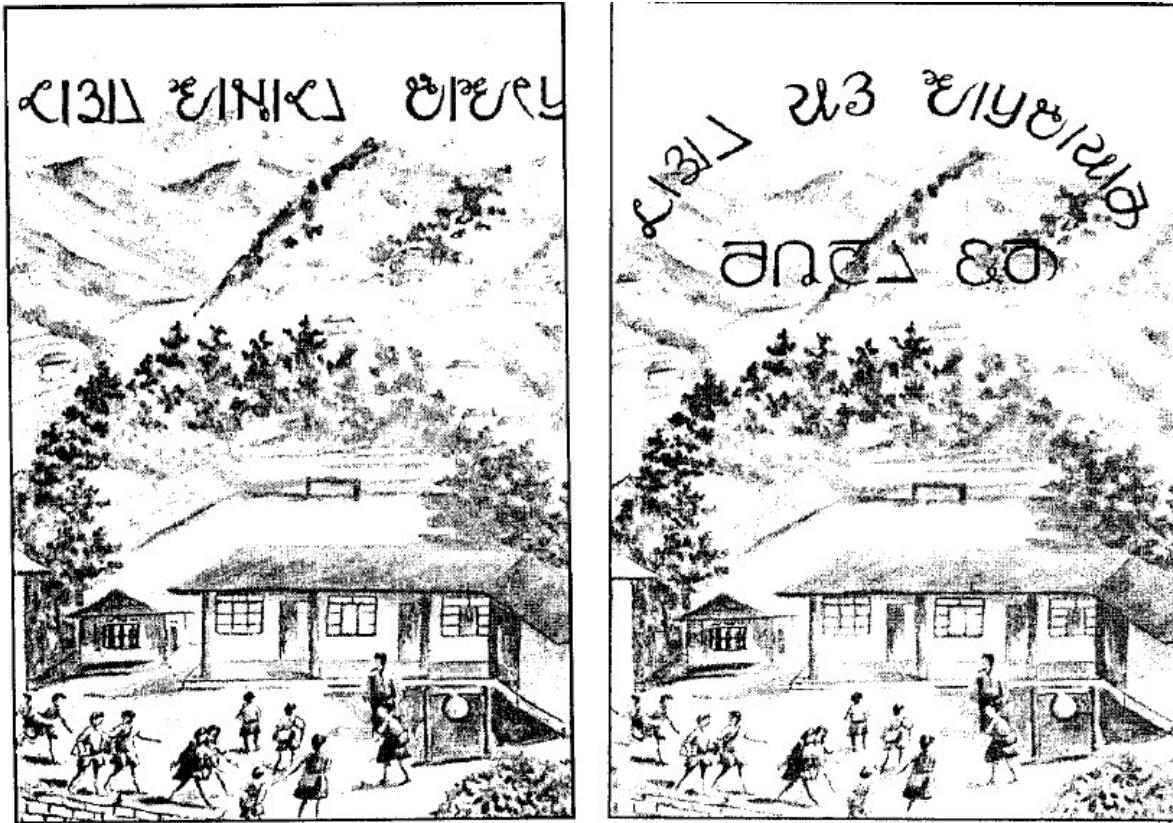


Figure 20: Covers of first two primer of Kirat Rai i.e. ਕਿਰਾਤ ਰੈ ਚਾਮਾਰੀ ਲਾਚੇਪ (Left, p. 48) and ਕਿਰਾਤ ਰੈ ਚਾਪਲਾਯਾਕ-ਬਸੀਦਾ ਏਫ Rāī Yañ Chāpalāyāk-Busī Dak (Right, p. 49). AKRS (2003)



Figure 21: Handwritten form of Kirat Rai, chapter ੩੩ ਮੈਨ ਅਨ ਖਿਮ 'My House' from ਕ੍ਰਿਤ ਮੁਹਾਫ਼ ਸ਼ਾਸਤਰੀ-ਰਿਹਾਂ ਦੀ ਰਾਇ ਚਾਪਲਾਯਾਕ-ਬੁਸੀ ਦਾਕ. AKRS (2003)

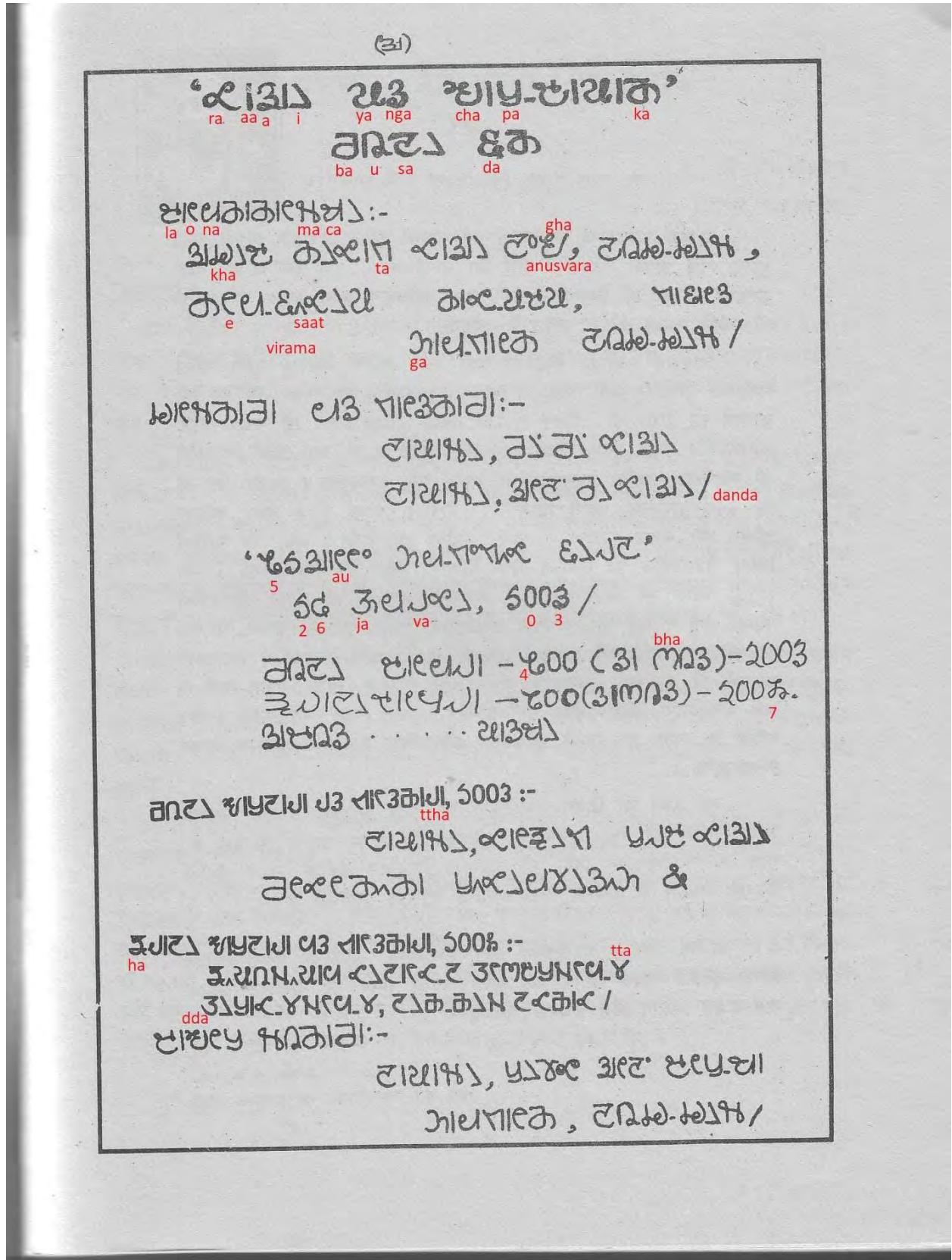


Figure 22: Class 1. AKRS (2003)

ચુટકીન ગ્રામેણ

ક્રમાંક- ચુટકી	ચુટકીન ગ્રામેણ	શુદ્ધાંગણ
02	કાર્યાલા	02
01		
05	કર્માંગ્રામ	05 - 06
02	કાર્યાલા	0%
03	કાર્યાલા	0%
05	કર્માંગ્રામ	02 - 53
04	કર્માંગ્રામ	54 - 55
02	કર્માંગ્રામ	56 - 33
05	કર્માંગ્રામ	34
02	કર્માંગ્રામ	35 - 36
05	કર્માંગ્રામ	36 - 32
20	કાર્યાલા	39
22	કૃપાં કાપાંધારાં કર્માંગ	30
25	કાપ	32 - 33
23	કાપાં	34 - 32
25	કાપાંધારાં કર્માંગ	35
26	કાં કાં (2)	36
26	કાં કાં (5)	37
26	કર્માંગ કર્માંગ	38 - 55
52	કર્માંગ	53

Figure 23: Class 1. AKRS (2003)



Figure 24: KIRAT RAI LETTER NYA. Class 1. AKRS (2003)

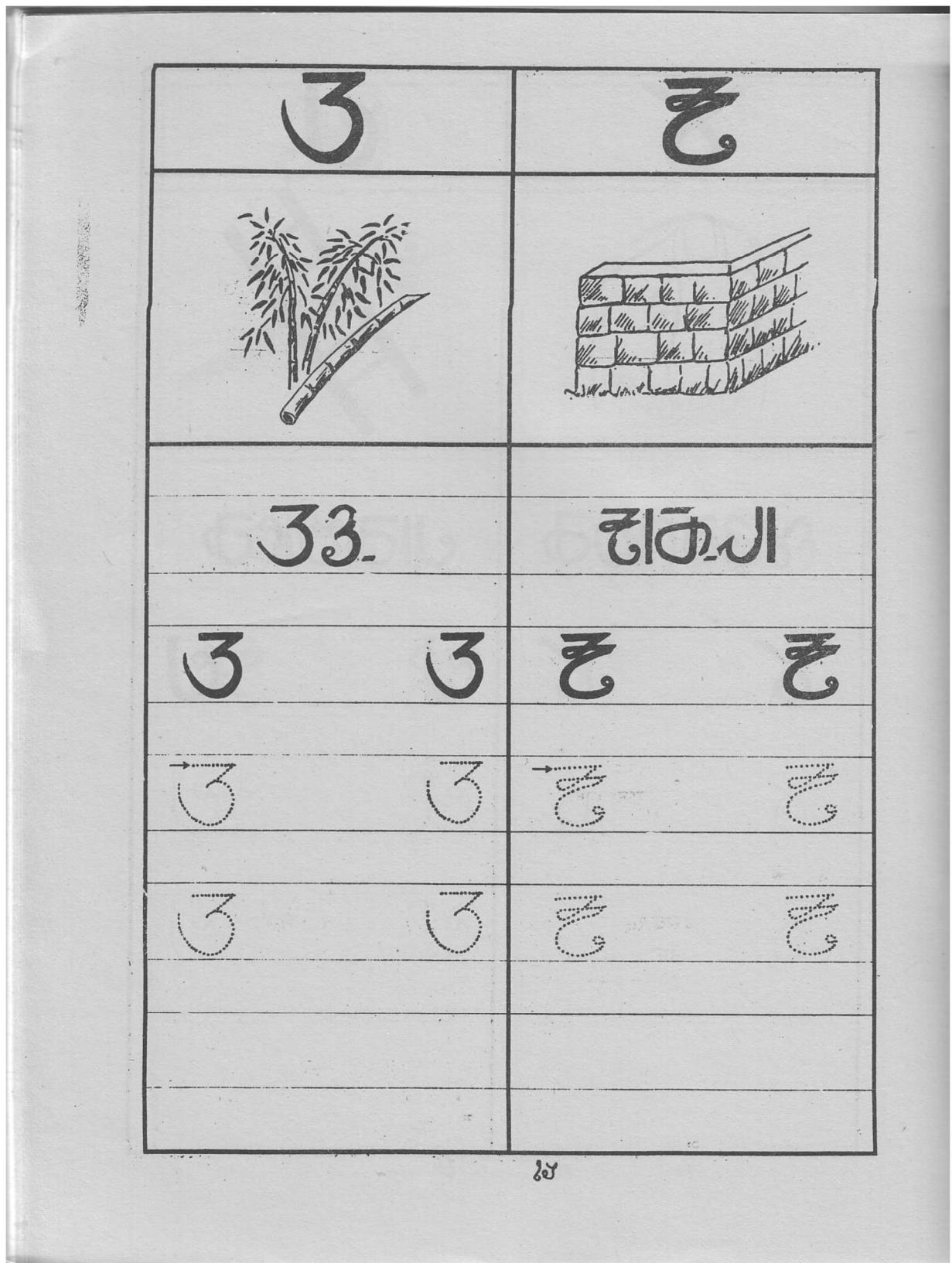


Figure 25: KIRAT RAI LETTER DDHA. Class 1. AKRS (2003)

નવમાં -

'ર' કુદ્દલાંગાર મા-દીલાંગાર
સા-શાંકા શાપુરાંગાં : -

૧ માનાર જેવાંદાયા દેખતારાં
¹ યાંદા ?

૨ માનાર ટાં ટાંબા ન-શરૂ ?

૩ માનાર રહણ દી યાંદા ?

૪ રહણાંદા માનાર યાંદા ?

૫ માનાર કુદ્દલાંગ દી યાંદા ?

'ન' નરાંગાંદા , ધરણ , અખાંગ.નાં
ભરડાંગાંદા , ટેન્ન.ટેન્ન.ના /

લાલા પ્રાણાર રૈફિલાખા
^{dha} દ્વારા નાંદેવાંદ રૈફિલાખા શીલાંગાં
કુદ્દલાંગાર રૈફિલાખાર વા-શાંપુરાં
શાપુરાંગાં : -

૨ અં... માના યાંદા /

૩ આથકાલા તી યાં /

૪ માના હાયા એક યાંદા /

૫ જાંન કુદ્દલાં યાંદા /

૬ આથકાલાંના આથકાલાંના માના
લાર લાના //

૪૨

Figure 26: Class 1. AKRS (2003)

ਕਾਥਿਲਿਆ ਅਤੇ ਜਾਈਪਾਂਗਿਆ

ਅਨੁਸਾਰੀ:-

ਕਹਾਲਿਆ	ਕਾਥਿ	ਕਾ: ਕਾ... ਕਾ: ਕਾ...
ਪ੍ਰਾ	ਕਾਵਾ	ਕਾ... ਕਾ...
ਜਾਹਿਲਿਆ	ਕਾਵਾ	ਕਾ... ਕਾ...
ਰਾਹ	ਕਾਵਾ	ਕਾਏਕਾਵਾ... ਕਾਏਕਾਵਾ...
^{sha} ਝਾਹਿਲਿਆ	ਕਾਵਾ	ਕਾ: ਕਾ... ਕਾ: ਕਾ...
ਛਾਹਿਲਿਆ	ਕਾਵ	ਕਾਾਂ ਕਾਾਂ... ਕਾਾਂ ਕਾਾਂ...
ਧਥ	ਕਾਵ	ਕਾ... ਕਾ... ਕਾ...
ਖਾਈਲਿਆ	ਕਾਵ	ਕਾਂ. ਕਾਂ. ਕਾਂ...
ਸਾਧਾ	ਕਾਵ	ਕਾਏਕਾਵ ਕਾਏਕਾਵ...
ਸਾਹਾ	ਕਾਏਕ	ਕਾਏਕ ਪਕਾਏ ਕਾਏਕ...
ਛਾਈਲਿਆ	ਕਾਏਕ	ਕਾਏਕ... ਕਾਏਕ...
^{phā} ਫਲਿਲਿਆ	ਕਾਏਕ	ਕਾਏਕ... ਕਾਏਕ...
ਕਾਕਿਆ	ਕਾਵ	ਕਾ: ਕਾ... ਕਾ: ਕਾ...
ਕਾਕਿਆ	ਕਾਵ	ਕਾਕਿਆ... ਕਾਕਿਆ...

ਅਨੁਸਾਰੀ:-

ਕਾਥਿਲਿਆ ਅਤੇ ਜਾਈਪਾਂਗਿਆ
ਅਨੁਸਾਰੀ ਮਾਧਿਕਾਦ ਜਾਪਾਨਿਆ /

Figure 27: Class 1. AKRS (2003)

‘ଆ-ଆଖ’ (୫)

ଆଖ-

ରାତ୍ରା ଆଖା ଆଏତା ରାତ୍ରା,
ଆପୁଞ୍ଜା-ଆକୁଞ୍ଜା ଲାଗୁଣ୍ଜାନ ମାର୍ଜନା,
କାନ୍ଦ-ଆହୁକ-ବାହୁପା ପାଠମୁଳେ,
ଲାବସାର ଚାଷା କୁମ୍ବ-କୁମ୍ବ-ଲେ,
ଶାପୁଜାଧାର ଜାରୀ ମରୁପୁଲୁଲ-ଲେ,
ଶେଷୁ-ଯାତ ମଧ୍ୟ ଦୁର୍ଦୁଲୁଲ-ଲେ //

ନରଲୁଙ୍ଗା-

‘ମୁଖୀଅରୁ...ମୁଖୀଅରୁ...’ ନରଲୁଙ୍ଗା,
ଆଏନ୍-ପୁଅକିଲା ^{tonpi} ତେବେଲୁଙ୍ଗା ,
ଧରିଛା ଲେଖାଲରୁଙ୍ଗା ,
ଶ୍ରୀଂପାଖା ପାଖାଲରୁଙ୍ଗା //

କରଣୀପା-

‘ମିରୁ...ମିରୁ...’ କରଣୀପା,
ତେବେ କାରକୁଞ୍ଜା ଆଥରୁଙ୍ଗା ,
କାଲ-କାଲାଞ୍ଜା କୁରୁକୁରାଲରୁଙ୍ଗା,
ମରୁତାପାଧା ତ୍ରୀଂଘାଲରୁଙ୍ଗା //

ମରୁମୁଣ୍ଡା:-

ଆଏତାର ଆ-ଆଖ ପାଇଁଏକ
ମୁପୁରାରକୁ ଆଖା, ନରଲୁଙ୍ଗା ଥବି
କରଣୀପା-ତ୍ରୀ ଦୀ ଦୀ ମରୁଲେତା
ନ-ନର ? ଆପୁରୁଲେ /

^{danda}

[ଆଏତାରାର ଆ-ଆଖାର ରେଣ୍ଟା ନମ୍ବରୁ ମୁପୁରାରକୁ କାହାରେଣ୍ଟା
ନରଲୁଙ୍ଗା ଲାଖାର ରେଣ୍ଟା ଥବି କାହାରାରାରକୁ ଥିଲେବୁ ଶବ୍ଦାଙ୍କାରୀ /]

୪୨

Figure 28: Class 1. AKRS (2003)

Proposal to Encode Kirat Rai script in the Universal Character Set

तोपद्धाम - (स्वरवर्णा) -
 तु अ आ आ ई इ ई
 कु उ ऊ ऊ श्च न्न
 पु ए प्रे ऐ ओ ओ ओ

राई भाषा भाट व्यांजन लयीलाई, राई द्वाम, मनि
 राई द्वाम - (घण्डुन वर्णा) -
 नक ग्र स्वा ग ग्न घ ङ् ङ.
 च च०४ छ ज ज्ञ ख ख
 श्च ट छ ठ त ङ छ ठ य ण
 भ त छ थ छ द छ छ ब न
 य प फ फ त ब ल भ भ म
 ह य र र स ल ठ व ङ व
 श श श श ए ए
 छ छ ठ ठ अ द ज त ब ज

Figure 29: Picture of Kripasalyan Lipi, from 'राई अक्षरको वर्णमाला Rāī Akṣarko Barnamālā', Kripasalyan (2:1969)

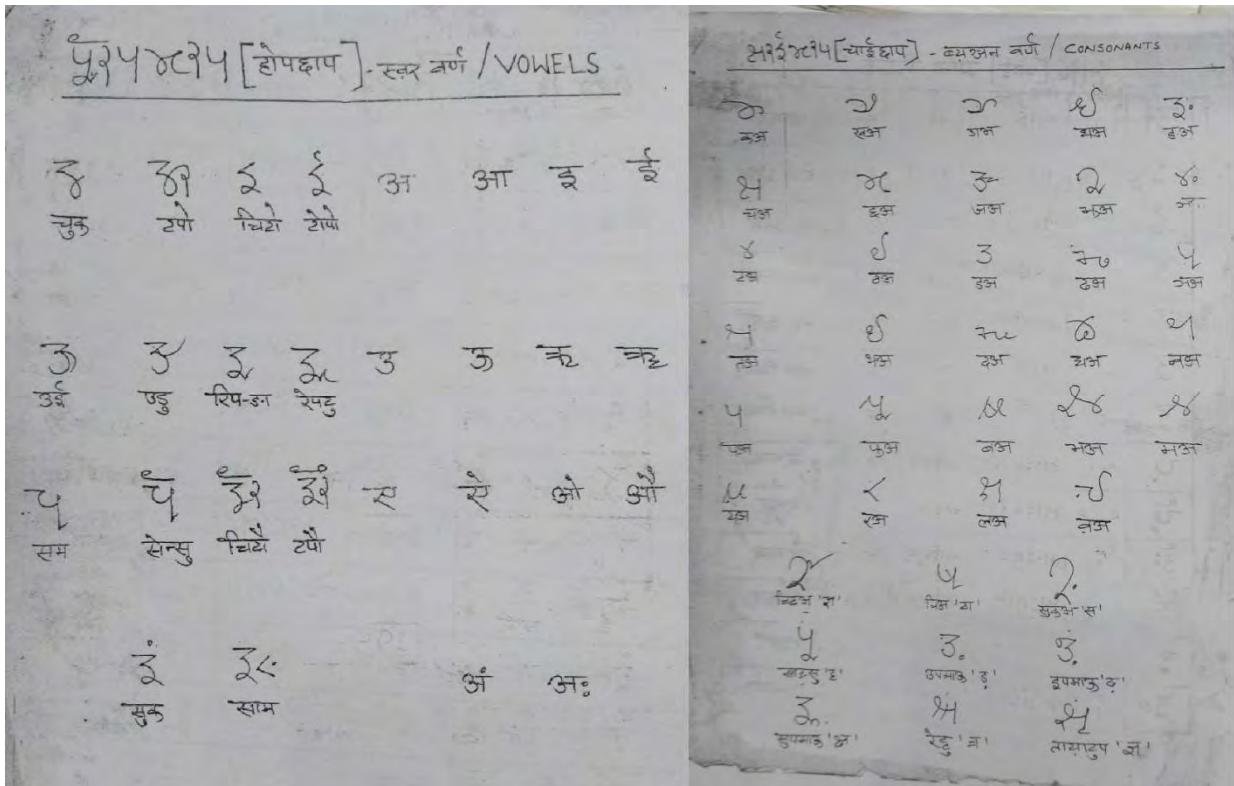


Figure 30: Picture of Khambu Rai Lipi revised by late B.B. Rai from Kripasalyan Lipi, 'ਬੁਸੁ ਕਿਰਾਵਾ ਚਾਈਛਾਪ Busu Kirāwā Cāīchāp - ਪ੍ਰਾਥਮਿਕ ਕਿਰਾਤ ਰਾਈ ਵਣਮਾਲਾ', AKRS (2, 3:1999)

7.09 Rai Script of Khambu-Rai:

The Khambu-Rai languages of 38 sub-tribes is written in Khambu-Rai script developed by Late Kripasalyan Rai in 1981-82 from the Devnagari script. The Khambu-Rai language (Bantawa language) is taught in schools up to the primary level ever since the Khambu-Rai language was recognized as one of the official languages of Sikkim in 1997.

The image shows a document titled "Khambu Rai 1998" at the top. Below the title are two tables of characters. The first table contains rows of characters with Devnagari equivalents below them. The second table contains rows of characters with English labels below them. The text in the tables is in the Khambu Rai script.

ଅ	ଆ	ଇ	ଈ	ଉ	ଓ	କ୍ର	କ୍ରେ	ସ୍ଟ୍ରେ	ସ୍ଟ୍ରୋ	ଓମ୍	ଓମ୍ବୋ
ଅ	ଆ	ଇ	ଈ	ଉ	ଓ	କ୍ର	କ୍ରେ	ସ୍ଟ୍ରେ	ସ୍ଟ୍ରୋ	ଓମ୍	ଓମ୍ବୋ

ଖାନ୍ଦିମ୍ବନ୍ଦୀତ୍ତ୍ଵରେ = କାର୍ଯ୍ୟକ୍ଷମିତି - ଲୟାଙ୍ଗନବଳୀ ||

କ	ର	ପ	ଗ	ଘ	ଡ	ଚ	ଛ	ଜ	ଝ	ଝୁ	ନ	ର	ତ	ତୁ	ତର	ପୁ
ଶ	ଷ	ସ	ହ	ଫ	ଫୁ	ଢ	ଢୁ	ଜୁ	ଝୁ	ଝୁଣୁ	ନୁ	ରୁ	ତୁଣୁ	ତରୁ	ପୁଣୁ	
ତ	ଥ	ଦ	ଧ	ନ	ପ	ଫ	ଫୁ	ବ	ଭ	ଭୁ	ମ	ମୁ	ଯ	ରଲ	ଲପ	
ରୁ	ପୁ	ବୁ	ଫୁ	ଫୁଣୁ	ବୁଣୁ	ବୁଣୁଣୁ	ବୁଣୁଣୁଣୁ									
ଶା	ଷା	ସା	ହା	ଫା	ଫୁଣୁ	ବୁଣୁଣୁ	ବୁଣୁଣୁଣୁ	ବୁଣୁଣୁଣୁଣୁ								

The Khambu-Rai script has the same letters as that of Devnagari with 14 vowels, 13 vowel signs, and 38 consonants (Rai, Krishnadas in Lipi Sangalo (ed) by Limboo, R.B. 1998:54-59).

Figure 31: Picture of Khambu Rai 1998 (Subba, p. 98).

9 Acknowledgements

We wish to thank Chandra Khaling, B.B. Rokdung Rai, Prabhat Rai, Dr. Deborah Anderson, Akhil Kirat Rai Sangh Sikkim, and Steve Smith for support on a draft of this proposal and sharing insights on various aspects of encoding Kirat Rai.

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ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title: *Proposal to Encode Kirat Rai script in the Universal Character Set*

2. Requester's name: *Biswajit Mandal and Lorna Evans*

3. Requester type (Member body/Liaison/Individual contribution): *Individual contribution*

4. Submission date: *20 April 2022*

5. Requester's reference (if applicable): *L2/22-043R*

6. Choose one of the following:

This is a complete proposal: *Y*

(or) More information will be provided later:

B. Technical – General

1. Choose one of the following:

a. This proposal is for a new script (set of characters):

Proposed name of script: *Kirat Rai*

Y

b. The proposal is for addition of character(s) to an existing block:

Name of the existing block:

58

2. Number of characters in proposal:

3. Proposed category (select one from below - see section 2.2 of P&P document):

A-Contemporary *Y*

B.1-Specialized (small collection)

B.2-Specialized (large collection)

C-Major extinct

D-Attested extinct

E-Minor extinct

F-Archaic Hieroglyphic or Ideographic

G-Obscure or questionable usage symbols

4. Is a repertoire including character names provided?

a. If YES, are the names in accordance with the “character naming guidelines”

in Annex L of P&P document? *Y*

Y

b. Are the character shapes attached in a legible form suitable for review? *Y*

Y

5. Fonts related:

a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard? *SIL*

b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.): *OFL*

6. References:

a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? *Y*

Y

b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? *Y*

7. Special encoding issues:

Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? *Y*

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹ Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	<input checked="" type="checkbox"/> Y
If YES explain	<i>Preliminary version was made by Anshuman Pandey in 2011 (L2/11-145 and L2/11-105 and the related Khambu Rai L2/11-105)</i>
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?	<input checked="" type="checkbox"/> Y
If YES, with whom?	<i>Akhil Kirat Rai Sangh Sikkim (AKRS)</i>
If YES, available relevant documents:	<i>In this document, section 7.</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?	<input checked="" type="checkbox"/> Y
Reference:	<i>This document</i>
4. The context of use for the proposed characters (type of use; common or rare)	<input type="checkbox"/>
Reference:	<input type="checkbox"/>
5. Are the proposed characters in current use by the user community?	<input checked="" type="checkbox"/> Y
If YES, where? Reference:	<i>This document</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?	<input checked="" type="checkbox"/> N
If YES, is a rationale provided?	<input type="checkbox"/>
If YES, reference:	<input type="checkbox"/>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	<input checked="" type="checkbox"/> Y
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?	<input checked="" type="checkbox"/> Y
If YES, is a rationale for its inclusion provided?	<input type="checkbox"/>
If YES, reference:	<i>This document</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?	<input checked="" type="checkbox"/> Y
If YES, is a rationale for its inclusion provided?	<input type="checkbox"/>
If YES, reference:	<i>This document</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character?	<input checked="" type="checkbox"/> Y
If YES, is a rationale for its inclusion provided?	<input type="checkbox"/>
If YES, reference:	<i>This document</i>
11. Does the proposal include use of combining characters and/or use of composite sequences?	<input checked="" type="checkbox"/> N
If YES, is a rationale for such use provided?	<input type="checkbox"/>
If YES, reference:	<input type="checkbox"/>
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?	<input type="checkbox"/>
If YES, reference:	<input type="checkbox"/>
12. Does the proposal contain characters with any special properties such as control function or similar semantics?	<input checked="" type="checkbox"/> N
If YES, describe in detail (include attachment if necessary)	<input type="checkbox"/>
13. Does the proposal contain any Ideographic compatibility characters?	<input checked="" type="checkbox"/> N
If YES, are the equivalent corresponding unified ideographic characters identified?	<input type="checkbox"/>
If YES, reference:	<input type="checkbox"/>