

Proposal to Encode Indic Siyaq Numbers in Unicode

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1 Introduction

This is a proposal to encode Indic Siyaq Numbers in the Unicode standard. It draws upon information originally presented in the following documents and it supersedes those documents:

- L2/07-414 “Proposal to Encode Siyaq Numerals”
- L2/09-166 “Raqm Numerals: Towards a Model for Encoding Numerals of the Siyaq Systems”
- L2/11-270 “Preliminary Proposal to Encode Indic Siyaq Numbers in the UCS”

Discussions regarding the encoding model for Indic Siyaq Numbers were presented in L2/09-166 and L2/11-270. Proposals to encode characters of the other three Siyaq systems have been submitted. The following documents contain information on the typology of the numbers and the notation system, and explain the necessity for encoding independent blocks for the four Siyaq systems:

- L2/15-066 “Proposal to Encode Indic Siyaq Numbers in Unicode”
- L2/15-072 “Proposal to Encode Ottoman Siyaq Numbers in Unicode”
- L2/15-122 “Proposal to Encode Persian Siyaq Numbers in Unicode”

2 Script Details

Name and allocation The proposed characters belong to a block named ‘Indic Siyaq Numbers’. The block is tentatively allocated to the SMP at U+1EC70..1ECBF.

Representative glyphs The representative glyphs for Indic Siyaq Numbers have been produced by the proposal author using glyphs from the Jameel Noori Nastaliq font.

Structure Indic Siyaq Numbers represent units of a decimal positional system. The notation system is additive, that is, the numeric value is the sum of each number in a Siyaq number sequence. There is no character for zero; it is inherently represented in the distinct numerals for the various decimal orders. There

are distinctive numbers for the primary units, tens, hundreds, thousands, and ten thousands. The hundred thousands, millions, and higher orders are represented using distinctive numbers as well as unit marks.

Directionality Indic Siyaq Numbers are written right-to-left in the regular manner of the Arabic script. The system differs from the Arabic-Indic digits, which are written left-to-right.

Ordering The ordering of Indic Siyaq Numbers is visual, which reflects the method of expressing numbers in Arabic. In a Siyaq sequence the largest number occurs first and smaller units follow in order to the left. An exception occurs for compound numbers containing primary numbers. Such compounds are written transposed, with an alternate form of the primary unit placed before the larger number.

Positioning and orientation In a numerical sequence the largest number occurs first and smaller units follow in order to the left. If a number has a horizontal stroke that extends leftward, then the following number is generally raised and positioned above its stroke. This stack is oriented in a south-east to north-west direction. This method of positioning sets Indic Siyaq numbers slightly apart from surrounding content in running text. The baseline line for Siyaq numbers is not completely horizontal; while the baseline for Urdu in the *nastalīq* style descends from right to left, the baseline for Indic Siyaq ascends.

Script environment Indic Siyaq Numbers are generally used within an Arabic script environment and within an Urdu linguistic context. Arabic-Indic digits may be used within Siyaq sequences, particularly for representation of small currency units (see section 4). The ‘extended’ Arabic-Indic digits of the Arabic block should be specified as extensions (see section 5).

3 Characters Proposed

3.1 Primary numbers

The following 9 characters are used for representing the primary units:

Character	Arabic source	Value
عصم INDIC SIYAQ NUMBER ONE	احد <i>aḥad</i>	1
عصا INDIC SIYAQ NUMBER TWO	عددا <i>‘adadān</i>	2
عے INDIC SIYAQ NUMBER THREE	ثلاثة <i>ṭalāṭa</i>	3
للو INDIC SIYAQ NUMBER FOUR	اربعة <i>arba‘a</i>	4
ص INDIC SIYAQ NUMBER FIVE	خمسة <i>ḥamsa</i>	5
ے INDIC SIYAQ NUMBER SIX	ستة <i>sitta</i>	6
موه INDIC SIYAQ NUMBER SEVEN	سبعة <i>sab‘a</i>	7
مے INDIC SIYAQ NUMBER EIGHT	ثمانية <i>ṭamāniya</i>	8
لوہ INDIC SIYAQ NUMBER NINE	تسعة <i>tis‘a</i>	9

The Indic Siyaq numbers for ONE and TWO differ in their origins from corresponding characters in other Siyaq systems. The عصم ONE is derived from the Arabic word عدد *‘dad* “single”, not from واحد *wāḥid* “one”. The عصا TWO is derived from the Arabic word عدنان *‘dadān* “dual”, not from اثنان *iṭnān* “two”.

3.2 Alternate forms of the primary numbers

The following 9 characters are used for the primary numbers in compounds:

Character	
لہ	INDIC SIYAQ ALTERNATE NUMBER ONE
عہ	INDIC SIYAQ ALTERNATE NUMBER TWO
سہ	INDIC SIYAQ ALTERNATE NUMBER THREE
للوہ	INDIC SIYAQ ALTERNATE NUMBER FOUR
صہ	INDIC SIYAQ ALTERNATE NUMBER FIVE
—	INDIC SIYAQ ALTERNATE NUMBER SIX
موہ	INDIC SIYAQ ALTERNATE NUMBER SEVEN
مہ	INDIC SIYAQ ALTERNATE NUMBER EIGHT
لوہ	INDIC SIYAQ ALTERNATE NUMBER NINE

The alternate forms are not glyphic variants, but are used in place of the regular primary number in forming compound numbers involving the tens, ten thousands, lakhs (hundred thousands), and crores (tens of millions). A comparison of the regular and alternate forms is shown below:

	Regular	Alternate		Regular	Alternate
ONE	عہم	لہ	SIX	لے	—
TWO	عہا	عہ	SEVEN	موہ	موہ
THREE	سے	سہ	EIGHT	مہ	مہ
FOUR	للوہ	للوہ	NINE	لوہ	لوہ
FIVE	صہ	صہ			

See below for further discussion of the alternate forms.

3.3 Tens

The following 9 characters are used for representing the tens:

Character		Arabic source	Value	
عہ	INDIC SIYAQ NUMBER TEN	عشرة	'ašara	10
عہ	INDIC SIYAQ NUMBER TWENTY	عشرون	'iṣrūn	20
سہ	INDIC SIYAQ NUMBER THIRTY	ثلاثون	ṭalāṭūn	30
للوہ	INDIC SIYAQ NUMBER FORTY	اربعون	arba'ūn	40

٥	INDIC SIYAQ NUMBER FIFTY	خمسون	<i>hamsūn</i>	50
٦	INDIC SIYAQ NUMBER SIXTY	ستون	<i>sittūn</i>	60
٧	INDIC SIYAQ NUMBER SEVENTY	سبعون	<i>sab'ūn</i>	70
٨	INDIC SIYAQ NUMBER EIGHTY	ثمانون	<i>tamānūn</i>	80
٩	INDIC SIYAQ NUMBER NINETY	تسعون	<i>tis'ūn</i>	90

Modified forms of the tens are used in compounds for representing the tens of lakh (primary millions) and tens of crores (hundred millions). These forms are identical to the regular tens, but possess an elongated horizontal tail instead of a terminal loop. With the exception of TEN, TWENTY, and EIGHTY, these ‘alternate’ forms of the tens are nearly identical to the corresponding alternate forms of the primary numbers; the difference being the length of the horizontal stroke. A comparison is shown below:

	Regular	‘Alternate’		
TEN	١٠	١٠	ALTERNATE NUMBER ONE	١
TWENTY	٢٠	٢٠	ALTERNATE NUMBER TWO	٢
THIRTY	٣٠	٣٠	ALTERNATE NUMBER THREE	٣
FORTY	٤٠	٤٠	ALTERNATE NUMBER FOUR	٤
FIFTY	٥٠	٥٠	ALTERNATE NUMBER FIVE	٥
SIXTY	٦٠	٦٠	ALTERNATE NUMBER SIX	٦
SEVENTY	٧٠	٧٠	ALTERNATE NUMBER SEVEN	٧
EIGHTY	٨٠	٨٠	ALTERNATE NUMBER EIGHT	٨
NINETY	٩٠	٩٠	ALTERNATE NUMBER NINE	٩

Furthermore, these ‘alternate’ forms are identical to the ten thousands (see section 3.6 and figure 3). Despite these similarities, Indic Siyaq undoubtedly possesses a set of ‘alternate’ forms for the tens, and does not simply repurpose the alternate forms of the primary numbers or the ten thousands. This is supported by the fact that the ‘alternate’ numbers for TEN, TWENTY, and EIGHTY differ from the alternate forms for ONE, TWO, and EIGHT, while the rest are identical. Secondly, the ‘alternate’ tens are used instead of the regular tens for denoting the tens of lakhs and tens of crores, while the primary lakhs and primary crores are expressed using regular forms of the primary numbers, not the alternate forms.

Although it would be logical to encode a complete set of ‘alternate’ tens on the basis of character semantics, seven of these numbers would be nearly identical to the alternate forms of the primary numbers, apart from the difference in length of the horizontal stroke. For this reason, instead of encoding a separate set of ‘alternate’ tens, it is recommended that the numbers for the ten thousands be used secondarily as ‘alternate forms’ for the tens when representing lakhs and crores.

3.4 Hundreds

The following 10 characters are used for representing the hundreds:

Character	Arabic source	Value
𑂣	مائة <i>mi`a</i>	100
𑂤	مائتان <i>mi`ātān</i>	200
𑂥	ثلاث مائة <i>ṭalāṭu mi`a</i>	300
𑂦	اربع مائة <i>arba`u mi`a</i>	400
𑂧	خمسة مائة <i>ḥamsu mi`a</i>	500
𑂨	ست مائة <i>sittu mi`a</i>	600
𑂩	سبع مائة <i>sab`u mi`a</i>	700
𑂪	ثمان مائة <i>ṭamānu mi`a</i>	800
𑂫	تسع مائة <i>tis`u mi`a</i>	900

3.5 Thousands

The following 10 characters are used for representing the thousands:

Character	Arabic source	Value
𑂬	الف <i>alf</i>	1,000
𑂭	الفان <i>alfān</i>	2,000
𑂮	ثلاثة الاف <i>ṭalāṭa ālāf</i>	3,000
𑂯	اربعة الاف <i>arba`a ālāf</i>	4,000
𑂰	خمسة الاف <i>ḥamsa ālāf</i>	5,000
𑂱	ستة الاف <i>sitta ālāf</i>	6,000
𑂲	سبعة الاف <i>sab`a ālāf</i>	7,000
𑂳	ثمانية الاف <i>ṭamāniya ālāf</i>	8,000
𑂴	تسعة الاف <i>tis`a ālāf</i>	9,000

3.6 Ten Thousands

The following 10 characters are used for representing the ten thousands:

Character	Arabic source	Value
𑂵	عشرة الاف <i>‘ašara ālāf</i>	10,000

ع	INDIC SIYAQ NUMBER TWENTY THOUSAND	عشرون الفا	<i>'iṣrūn alfan</i>	20,000
ب	INDIC SIYAQ NUMBER THIRTY THOUSAND	ثلاثون الفا	<i>talāṭūn alfan</i>	30,000
ل	INDIC SIYAQ NUMBER FORTY THOUSAND	اربعون الفا	<i>arba'ūn alfan</i>	40,000
ص	INDIC SIYAQ NUMBER FIFTY THOUSAND	خمسون الفا	<i>ḥamsūn alfan</i>	50,000
س	INDIC SIYAQ NUMBER SIXTY THOUSAND	ستون الفا	<i>sittūn alfan</i>	60,000
م	INDIC SIYAQ NUMBER SEVENTY THOUSAND	سبعون الفا	<i>sab'ūn alfan</i>	70,000
ل	INDIC SIYAQ NUMBER EIGHTY THOUSAND	ثمانون الفا	<i>tamānūn alfan</i>	80,000
و	INDIC SIYAQ NUMBER NINETY THOUSAND	تسعون الفا	<i>tis'ūn alfan</i>	90,000

The numbers for the ten thousands are modified versions of the tens; they possess elongated instead of looped tails. Several of the elongated forms of the tens are virtually identical to the alternate forms of the primary units, simply being versions of the latter with longer strokes (see section 3.2).

TEN THOUSAND	ع	'alternate' ten	ع
TWENTY THOUSAND	ع	'alternate' twenty	ع
THIRTY THOUSAND	ب	'alternate' thirty	ب
FORTY THOUSAND	ل	'alternate' forty	ل
FIFTY THOUSAND	ص	'alternate' fifty	ص
SIXTY THOUSAND	س	'alternate' sixty	س
SEVENTY THOUSAND	م	'alternate' seventy	م
EIGHTY THOUSAND	ل	'alternate' eighty	ل
NINETY THOUSAND	و	'alternate' ninety	و

The distinction between the ten thousands and alternate forms of primary numbers is quite evident in the sources, and numbers for the ten thousands must be encoded. For this reason, representative glyphs for the ten thousands have been created with a slight upward curve of the tail. This feature is not an intrinsic aspect of the ten thousands, but is necessary for glyphic differentiation. The ten thousands are used as 'alternate forms' of the tens when writing the tens of lakhs and crores.

3.7 Hundred thousand

The following character is used for representing the hundred thousands or lakhs in the Deccani style:

Character	Arabic source	Value
ل	مائة الاف <i>mi'at ālāf</i>	100,000

The INDIC SIYAQ NUMBER ONE HUNDRED THOUSAND is used primarily in the 'Deccani' or south Indian style of

Siyaq. In the ‘Hindustani’ or northern Indian style, the hundred thousands are generally represented using the ‘lakh marks’ shown below.

3.8 Lakh (hundred thousand)

The following 3 characters are used for representing the hundred thousands:

Character	Hindi source	Value
لکھہ INDIC SIYAQ NUMBER LAKH	ایک لاکھ <i>ek lakh</i>	100,000
لکھان INDIC SIYAQ NUMBER LAKHAN	دو لاکھ <i>do lakh</i>	200,000
لک INDIC SIYAQ NUMBER LAKH MARK	لاکھ <i>lakh</i>	100,000

The لکھہ LAKH is derived from the Hindi word लाख *lakh*, which is equivalent to “one hundred thousand”. The glyph for لکھان LAKHAN or “two hundred thousand” is based upon the same pattern by which عسما TWO is derived from عسمة ONE; by the adding of the the suffix *-an* for denoting a doubling. The لک LAKH MARK is a further contraction of لکھہ LAKH that is used for writing multiples of the primary units. While it is possible to represent LAKH, LAKHAN, LAKH MARK using sequences of Arabic letters, they are proposed as atomic characters because they possess numerical values that cannot be obtained from letter sequences.

The resemblance between لک LAKH MARK and ل ONE HUNDRED THOUSAND is coincidental. The similarity occurs because of the original letters that constitute the shapes of the Siyaq numbers, but the forms are derived from different sources. As shown above, لک is derived from the Arabic representation لاکھ of Hindi *lakh*, while ل is a contraction of Arabic مائة الاف *mi’at ālāf*.

3.9 Crore (tens of million)

The following 10 characters are used for representing crores, or tens of millions:

Character	Hindi source	Value
کروڑ INDIC SIYAQ NUMBER KAROR	ایک کروڑ <i>ek karor</i>	10,000
کروڑاں INDIC SIYAQ NUMBER KARORAN	دو کروڑ <i>do karor</i>	20,000

The character کروڑ KAROR is derived from the Hindi करोड़ *karor*, equivalent to “ten million”. The glyph for کروڑاں KARORAN or “twenty million” is derived in a fashion similar to عسما TWO and لکھان LAKHAN. The کروڑ KAROR is used as a unit mark for writing multiples of the other primary units. While it is possible to represent KAROR and KARORAN using sequences of Arabic letters, similar to the the ‘lakh’ characters, they are proposed as atomic characters because they possess numerical values that cannot be obtained from letter sequences.

3.10 Placeholder

ω INDIC SIYAQ PLACEHOLDER

The PLACEHOLDER is written after a number to indicate the end of a numeric sequence. It is generally written after large amounts, particularly with thousands. Its usage is optional.

3.11 Fractions

¼ INDIC SIYAQ FRACTION ONE QUARTER

½ INDIC SIYAQ FRACTION ONE HALF

⅓ INDIC SIYAQ FRACTION ONE THIRD

The glyphs for fraction characters are rudimentary shapes that resemble characters in the Arabic block, such as ٠ U+0660 ARABIC-INDIC DIGIT ZERO and ٠ U+06F0 EXTENDED ARABIC-INDIC DIGIT ZERO, and ٫ U+06D4 ARABIC FULL STOP; as well as generic characters such as ٫ U+00B7 MIDDLE DOT and ٫ U+002D HYPHEN-MINUS. However, the semantics of the Indic Siyaq fraction signs differs from those of characters that are visually similar. These fractions are included in the Indic Siyaq repertoire for this reason.

3.12 Currency mark

/ INDIC SIYAQ RUPEE MARK

The RUPEE MARK resembles existing Arabic characters, such as ٫ U+060D ARABIC DATE SIGN, currency signs in other scripts, such as / U+09F4 BENGALI CURRENCY NUMERATOR ONE, and various other characters, such as / U+002F SOLIDUS.

4 Orthography

Examples of the orthography of Indic Siyaq are given below:

5	٥	<٥ FIVE>
50	٥٠	<٥٠ FIFTY>
55	٥٥	<٥٥ ALTERNATE NUMBER FIVE, ٥٥ FIFTY>
500	٥٠٠	<٥٠٠ FIVE HUNDRED>
505	٥٠٥	<٥٠٥ FIVE HUNDRED, ٥٥ FIVE>

510	صمء	<صمء FIVE HUNDRED, ء TEN>
515	صمءء	<صمء FIVE HUNDRED, ء ALTERNATE NUMBER FIVE, ء TEN>
5,000	صم	<صم FIVE THOUSAND>
5,000	صمء	<صم DEPENDENT NUMBER FIVE, ء ONE THOUSAND>
5,005	صمءء	<صم FIVE THOUSAND, ء FIVE>
5,100	صمءا	<صم FIVE THOUSAND, ءا ONE HUNDRED>
50,000	صمء	<صمء FIFTY THOUSAND>
50,000	صمءء	<صمء FIFTY THOUSAND, ء ONE THOUSAND>
50,005	صمءءء	<صمء FIFTY THOUSAND, ءء FIVE>
50,550	صمءءصمءء	<صمء FIFTY THOUSAND, صمء FIVE HUNDRED, ءء FIFTY>
55,000	صمءء	<صمء ALTERNATE NUMBER FIVE, ء FIFTY THOUSAND>
55,000	صمءءء	<صمء ALTERNATE NUMBER FIVE, ء FIFTY THOUSAND, ء ONE THOUSAND>
55,005	صمءءءء	<صمء ALTERNATE NUMBER FIVE, ء FIFTY THOUSAND, ءء FIVE>
5,00,000	صمء لءءءء	<صمء FIVE, لءءءء LAKH>
5,00,000	صمء لءء	<صمء FIVE, لءء ONE HUNDRED THOUSAND>
5,05,505	صمء لءءءء صمءءءء	<صمء FIVE, لءءءء LAKH, صمء FIVE THOUSAND, صمءءء FIVE HUNDRED, ءء FIVE>













5,55,555	صہ لکھہ صہ صہ صہ	<صہ FIVE, لکھہ LAKH, صہ ALTERNATE FIVE, صہ FIFTY THOUSAND, صہ FIVE HUNDRED, صہ ALTERNATE FIVE, صہ FIFTY>
50,00,000	صک	<صہ FIFTY THOUSAND, لک LAKH MARK>
50,00,000	صلک	<صہ FIFTY THOUSAND, لک ONE HUNDRED THOUSAND>
55,00,000	صک	<صہ ALTERNATE NUMBER FIVE, صہ FIFTY THOUSAND, لک LAKH MARK>
5,00,00,000	صہ کروڑ	<صہ FIVE, لکھہ KAROR>

Primary numbers Primary numbers are written using the respective character for each number when they occur independently and when they are used for expressing multiples of lakhs and crores.









3,00,000	سے لک	<سے THREE, لک LAKH MARK>
4,00,000	للو لک	<للو FOUR, لک LAKH MARK>
7,00,00,000	موہ کروڑ	<موہ SEVEN, کروڑ KAROR>
8,00,00,000	مے کروڑ	<مے EIGHT, کروڑ KAROR>


For primary numbers in compounds containing the tens and ten thousands, the primary unit and the larger number are transposed, with the primary unit placed before the larger number. Below are representations for 11–19. The pattern is the same for 21–99.

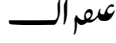











10	عہ	<عہ TEN>
11	لہ عہ	<لہ ALTERNATE NUMBER ONE, عہ TEN>
12	عہ عہ	<عہ ALTERNATE NUMBER TWO, عہ TEN>
13	دہ عہ	<دہ ALTERNATE NUMBER THREE, عہ TEN>
14	للو عہ	<للو ALTERNATE NUMBER FOUR, عہ TEN>
15	صہ عہ	<صہ ALTERNATE NUMBER FIVE, عہ TEN>

- 16  <  ALTERNATE NUMBER SIX,  TEN >
- 17  <  ALTERNATE NUMBER SEVEN,  TEN >
- 18  <  ALTERNATE NUMBER EIGHT,  TEN >
- 19  <  ALTERNATE NUMBER NINE,  TEN >

















Thousands The thousands are represented using the respective character that corresponds to each number:

- 1,000  <  ONE THOUSAND >
- 2,000  <  TWO THOUSAND >
- 3,000  <  THREE THOUSAND >
- 9,000  <  NINE THOUSAND >

In the Deccani style, the thousands are represented using  ONE THOUSAND as a unit mark, while the primary numbers indicate the appropriate multiple:

- 1,000  <  ONE,  ONE THOUSAND >
- 2,000  <  TWO,  ONE THOUSAND >
- 3,000  <  THREE,  ONE THOUSAND >
- 9,000  <  TWO,  ONE THOUSAND >

Ten thousands The thousands are represented using the respective character for each number. Multiples are written using alternate forms of the primary numbers, similar to the pattern for 11–19 described above:

- 10,000  <  TEN THOUSAND >
- 11,000  <  ALTERNATE NUMBER ONE,  TEN THOUSAND >
- 12,000  <  ALTERNATE NUMBER TWO,  TEN THOUSAND >
- 13,000  <  ALTERNATE NUMBER THREE,  TEN THOUSAND >
- 19,000  <  ALTERNATE NUMBER NINE,  TEN THOUSAND >
- 20,000  <  TWENTY THOUSAND >

In the Deccani style, the ten thousands may be represented using **ال** ONE THOUSAND as a unit mark, while the ten thousands indicate the appropriate multiple:

10,000	ع	< ع TEN THOUSAND, ال ONE THOUSAND >
11,000	ل ع	< ل ALTERNATE NUMBER ONE, ع TEN THOUSAND, ال ONE THOUSAND >
12,000	و ع	< و ALTERNATE NUMBER TWO, ع TEN THOUSAND, ال ONE THOUSAND >
13,000	د ع	< د ALTERNATE NUMBER THREE, ع TEN THOUSAND, ال ONE THOUSAND >
20,000	ع	< ع TWENTY THOUSAND, ال ONE THOUSAND >

The stroke of the ten thousands number is often extended beneath the width of the smaller numbers that follow it:

50,550 **ص**

Lakhs (hundred thousands) There are two different methods for representing the lakhs or hundred thousands. The first uses monograms derived from the word **لاکھ** *lakh*. The second uses the number **ل** ONE HUNDRED THOUSAND. The regular primary units are used for denoting multiples of this order.

1,00,000 (100,000)	لکھ	< لکھ LAKH >
2,00,000 (200,000)	لکھان	< لکھان LAKHAN >
2,00,000 (200,000)	دو لاکھ	< دو TWO, لاکھ LAKH MARK >
3,00,000 (300,000)	سے لاکھ	< سے THREE, لاکھ LAKH MARK >
9,00,000 (900,000)	نو لاکھ	< نو NINE, لاکھ LAKH MARK >

In the Deccani style, the hundred thousands are written as below (other examples given in figures 9 and 10):

1,00,000 (100,000)	ل	< ل ONE, ل ONE HUNDRED THOUSAND >
-----------------------	----------	---

2,00,000 (200,000)	٢٠٠٠٠٠	<٢٠٠ TWO, ١٠٠٠٠٠ ONE HUNDRED THOUSAND>
3,00,000 (300,000)	٣٠٠٠٠٠	<٣٠٠ THREE, ١٠٠٠٠٠ ONE HUNDRED THOUSAND>
9,00,000 (900,000)	٩٠٠٠٠٠	<٩٠٠ NINE, ١٠٠٠٠٠ ONE HUNDRED THOUSAND>

Tens of lakhs (primary millions) Tens of lakhs or 1–9 million are expressed using the ten thousands and the لک LAKH MARK. In this context, the ten thousands function as ‘alternate’ forms of the tens and possess the appropriate tens value. Multiples of the tens of lakhs are written in the same fashion as the ten thousands.

10,00,000 (1,000,000)	١٠٠٠٠٠	<١٠٠٠ TEN THOUSAND, لک LAKH MARK>
11,00,000 (1,100,000)	١١٠٠٠٠	<١٠ ALTERNATE NUMBER ONE, ١٠٠٠ TEN THOUSAND, لک LAKH MARK>
12,00,000 (1,200,000)	١٢٠٠٠٠	<٢٠ ALTERNATE NUMBER TWO, ١٠٠٠ TEN THOUSAND, لک LAKH MARK>
13,00,000 (1,300,000)	١٣٠٠٠٠	<٣٠ ALTERNATE NUMBER THREE, ١٠٠٠ TEN THOUSAND, لک LAKH MARK>
19,00,000 (1,900,000)	١٩٠٠٠٠	<٩٠ ALTERNATE NUMBER NINE, ١٠٠٠ TEN THOUSAND, لک LAKH MARK>
20,00,000 (2,000,000)	٢٠٠٠٠٠	<٢٠٠٠ TWENTY THOUSAND, لک LAKH MARK>
30,00,000 (3,000,000)	٣٠٠٠٠٠	<٣٠٠٠ THIRTY THOUSAND, لک LAKH MARK>
90,00,000 (9,000,000)	٩٠٠٠٠٠	<٩٠٠٠ NINETY THOUSAND, لک LAKH MARK>

In the Deccani style, the number ١٠٠٠٠٠ ONE HUNDRED THOUSAND is used as a unit mark instead of لک LAKH MARK:

10,00,000 (1,000,000)	١٠٠٠٠٠	<١٠٠٠ TEN THOUSAND, ١٠٠٠٠٠ ONE HUNDRED THOUSAND>
--------------------------	--------	--

11,00,000 (1,100,000)	لے لک	< لے ALTERNATE NUMBER ONE, لک TEN THOUSAND, لک ONE HUNDRED THOUSAND >
12,00,000 (1,200,000)	دے لک	< دے ALTERNATE NUMBER TWO, لک TEN THOUSAND, لک ONE HUNDRED THOUSAND >
13,00,000 (1,300,000)	تے لک	< تے ALTERNATE NUMBER THREE, لک TEN THOUSAND, لک ONE HUNDRED THOUSAND >
19,00,000 (1,900,000)	نوے لک	< نوے ALTERNATE NUMBER NINE, لک TEN THOUSAND, لک ONE HUNDRED THOUSAND >
20,00,000 (2,000,000)	دس لک	< دس TWENTY THOUSAND, لک ONE HUNDRED THOUSAND >
30,00,000 (3,000,000)	تیس لک	< تیس THIRTY THOUSAND, لک ONE HUNDRED THOUSAND >
90,00,000 (9,000,000)	نویس لک	< نویس NINETY THOUSAND, لک ONE HUNDRED THOUSAND >

Crores (ten millions) Crores are represented as follows: 1–9 crores are expressed using the regular forms of the primary numbers followed by **کروڑ** KAROR; 10–90 crores are expressed using the ten thousands, which function as ‘alternate forms’ of the tens and represent the appropriate tens value.

1,00,00,000 (10,000,000)	کروڑ	< کروڑ KAROR >
2,00,00,000 (20,000,000)	کروڑاں	< کروڑاں KARORAN >
2,00,00,000 (20,000,000)	دس کروڑ	< دس TWO, کروڑ KAROR >
3,00,00,000 (30,000,000)	تیس کروڑ	< تیس THREE, کروڑ KAROR >
9,00,00,000 (90,000,000)	نویس کروڑ	< نویس NINE, کروڑ KAROR >

Tens of crores (hundred millions) Tens of crores, or hundreds of millions, are represented using alternate forms of the tens. In encoded representations, the numbers for the ten thousands are to be used for the tens:

10,00,00,000 (100,000,000)	عکروے	<ع TEN THOUSAND, کروے KAROR>
11,00,00,000 (110,000,000)	لہعکروے	<لہ ALTERNATE NUMBER ONE, ع TEN THOUSAND, کروے KAROR>
12,00,00,000 (120,000,000)	عکروے	<ع ALTERNATE NUMBER TWO, ع TEN THOUSAND, کروے KAROR>
19,00,00,000 (190,000,000)	دعکروے	<د ALTERNATE NUMBER THREE, ع TEN THOUSAND, کروے KAROR>
20,00,00,000 (200,000,000)	عکروے	<ع TWENTY THOUSAND, کروے KAROR>

Alternate method of writing lakhs and crores As shown in figures 10–14, an alternate method of writing lakhs and crores is used in the Deccani style. Instead of the logical left-to-right order, the individual units of a number are positioned in inverse vertical order, such that the smallest number is written first with larger units ascending upwards and leftwards.

	Logical	Inverted
1,50,568	لکھ پانچ سو اسی	پانچ سو اسی لکھ
65,29,10,401	چوبیس لاکھ نوے کروڑ اسی	چوبیس لاکھ نوے کروڑ اسی

The inverse vertical orientation of Indic Siyaq numbers should be handled using rich-text layout.

Fractions and currency Currency in Indic Siyaq is counted in terms of the historical rupee, used before 1950 (see Pandey 2007 for a description of regional currency notation systems and the characters used for representing them in various Indic scripts). Currency is denoted using the / RUPEE MARK.

The روپیہ *rūpaya* (‘rupee’, abbreviated ‘Rs.’) and whole rupees are represented using Siyaq numbers and are denoted using the RUPEE MARK:

Rs. 10 /ع <ع TEN, / RUPEE MARK>

Rs. 100	₹	<₹ ONE HUNDRED, / RUPEE MARK>
Rs. 1,000	₹	<₹ ONE THOUSAND, / RUPEE MARK>
Rs. 1,000	₹	<₹ ONE THOUSAND, ^ω PLACEHOLDER, / RUPEE MARK>

The historical rupee is divided into 16 *ānā* (‘anna’, abbreviated ‘As.’). The anna is written using Arabic-Indic digits:

As. 1	۱	<۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK>
As. 2	۲	<۲ U+06F2 EXTENDED ARABIC-INDIC DIGIT TWO, / RUPEE MARK>
As. 3	۳	<۳ U+06F3 EXTENDED ARABIC-INDIC DIGIT THREE, / RUPEE MARK>
As. 14	۱۴	<۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, ۴ U+06F4 EXTENDED ARABIC-INDIC DIGIT FOUR, / RUPEE MARK>
As. 15	۱۵	<۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, ۵ U+06F5 EXTENDED ARABIC-INDIC DIGIT FIVE, / RUPEE MARK>
Rs. 1	₹	<₹ ONE, / RUPEE MARK>
Rs. 1, As. 1	₹	<₹ ONE, / RUPEE MARK, ۱ U+0661 EXTENDED ARABIC-INDIC DIGIT ONE>

The anna is divided into 12 *pāī* (‘pie’, plural ‘pice’, abbreviated ‘P’). The pie is written using Arabic-Indic digits, which are placed to the left of the RUPEE MARK.

P. 1	۱	<۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK>
P. 2	۲	<۲ U+06F2 EXTENDED ARABIC-INDIC DIGIT TWO, / RUPEE MARK>
P. 3	۳	<۳ U+06F3 EXTENDED ARABIC-INDIC DIGIT THREE, / RUPEE MARK>
P. 10	۱۰	<۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, ۰ U+06F0 EXTENDED ARABIC-INDIC DIGIT ZERO, / RUPEE MARK>
P. 11	۱۱	<۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, ۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK>
As. 1	۱	<۱ U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK>

As. 1, P. 1 ا / ا <| U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK, | U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE>

Additionally, as shown in figure 7, the word پائی itself may be written after the quantity:

السّامعیه ۱۱/۸/۰۸ پائی Rs. 1125, As. 11, Pai 8½

Additionally, the *pāt* is grouped into units called پیسا *paisā* (‘paise’, abbreviated ‘Ps’). Three pie constitute one paise. Four paise make one ana. The paise is represented using fraction signs:

Ps. 1 /- <| U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK>

Ps. 2 /• <۲ U+06F2 EXTENDED ARABIC-INDIC DIGIT TWO, / RUPEE MARK>

Ps. 3 /ش <۳ U+06F3 EXTENDED ARABIC-INDIC DIGIT THREE, / RUPEE MARK>

As. 1 / ا <| U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK>

As. 1, Ps. 1 /- ا <| U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE, / RUPEE MARK, | U+06F1 EXTENDED ARABIC-INDIC DIGIT ONE>

When currency values less than 1 rupee are written with larger values, then the sequence of characters denoting the former are positioned beneath the latter.

السّامعیه Rs. 1125, As. 11, Pai 8½
۱۱/۸/۰۸

Placeholder The ^و INDIC SIYAQ PLACEHOLDER is used for indicating the end of a numerical sequence. It is generally used with numbers larger than one thousand, and is positioned above the horizontal stroke. The PLACEHOLDER is used with such numbers in order to prevent forgery: the empty space above the horizontal stroke provides an opportunity to insert additional numbers.

1,000 السّ <— السّ ONE THOUSAND, ^و PLACEHOLDER>

10,000 ع <— ع TEN THOUSAND, ^و PLACEHOLDER>









When the PLACEHOLDER is coupled with the / RUPEE MARK, the two are written close together as ^و instead of as /^و:

1,000 السّ <— السّ ONE THOUSAND, ^و PLACEHOLDER, / RUPEE MARK>

A mark resembling the proposed / RUPEE MARK is used in the Deccani style as a placeholder, eg. لل instead of لل^و (see figure 10). It is unclear at present if this is a distinctive mark.

4.1 Glyphic Variants

There are glyphic variants of several numbers. These are not proposed for encoding as distinctive characters and their usage should be managed using fonts.

	Regular	Variant
INDIC SIYAQ NUMBER ONE		
INDIC SIYAQ NUMBER TWO		
INDIC SIYAQ NUMBER FIVE		
INDIC SIYAQ NUMBER TEN THOUSAND		

5 Character Data

Character Properties Properties in the format of UnicodeData.txt:

```

1EC71;INDIC SIYAQ NUMBER ONE;No;0;AL;;;;1;N;;;;;
1EC72;INDIC SIYAQ NUMBER TWO;No;0;AL;;;;2;N;;;;;
1EC73;INDIC SIYAQ NUMBER THREE;No;0;AL;;;;3;N;;;;;
1EC74;INDIC SIYAQ NUMBER FOUR;No;0;AL;;;;4;N;;;;;
1EC75;INDIC SIYAQ NUMBER FIVE;No;0;AL;;;;5;N;;;;;
1EC76;INDIC SIYAQ NUMBER SIX;No;0;AL;;;;6;N;;;;;
1EC77;INDIC SIYAQ NUMBER SEVEN;No;0;AL;;;;7;N;;;;;
1EC78;INDIC SIYAQ NUMBER EIGHT;No;0;AL;;;;8;N;;;;;
1EC79;INDIC SIYAQ NUMBER NINE;No;0;AL;;;;9;N;;;;;
1EC7A;INDIC SIYAQ NUMBER TEN;No;0;AL;;;;10;N;;;;;
1EC7B;INDIC SIYAQ NUMBER TWENTY;No;0;AL;;;;20;N;;;;;
1EC7C;INDIC SIYAQ NUMBER THIRTY;No;0;AL;;;;30;N;;;;;
1EC7D;INDIC SIYAQ NUMBER FORTY;No;0;AL;;;;40;N;;;;;
1EC7E;INDIC SIYAQ NUMBER FIFTY;No;0;AL;;;;50;N;;;;;
1EC7F;INDIC SIYAQ NUMBER SIXTY;No;0;AL;;;;60;N;;;;;
1EC80;INDIC SIYAQ NUMBER SEVENTY;No;0;AL;;;;70;N;;;;;
1EC81;INDIC SIYAQ NUMBER EIGHTY;No;0;AL;;;;80;N;;;;;
1EC82;INDIC SIYAQ NUMBER NINETY;No;0;AL;;;;90;N;;;;;
1EC83;INDIC SIYAQ NUMBER ONE HUNDRED;No;0;AL;;;;100;N;;;;;
1EC84;INDIC SIYAQ NUMBER TWO HUNDRED;No;0;AL;;;;200;N;;;;;
1EC85;INDIC SIYAQ NUMBER THREE HUNDRED;No;0;AL;;;;300;N;;;;;
1EC86;INDIC SIYAQ NUMBER FOUR HUNDRED;No;0;AL;;;;400;N;;;;;
1EC87;INDIC SIYAQ NUMBER FIVE HUNDRED;No;0;AL;;;;500;N;;;;;
1EC88;INDIC SIYAQ NUMBER SIX HUNDRED;No;0;AL;;;;600;N;;;;;
1EC89;INDIC SIYAQ NUMBER SEVEN HUNDRED;No;0;AL;;;;700;N;;;;;
1EC8A;INDIC SIYAQ NUMBER EIGHT HUNDRED;No;0;AL;;;;800;N;;;;;
1EC8B;INDIC SIYAQ NUMBER NINE HUNDRED;No;0;AL;;;;900;N;;;;;
1EC8C;INDIC SIYAQ NUMBER ONE THOUSAND;No;0;AL;;;;1000;N;;;;;
1EC8D;INDIC SIYAQ NUMBER TWO THOUSAND;No;0;AL;;;;2000;N;;;;;
1EC8E;INDIC SIYAQ NUMBER THREE THOUSAND;No;0;AL;;;;3000;N;;;;;
1EC8F;INDIC SIYAQ NUMBER FOUR THOUSAND;No;0;AL;;;;4000;N;;;;;
1EC90;INDIC SIYAQ NUMBER FIVE THOUSAND;No;0;AL;;;;5000;N;;;;;
1EC91;INDIC SIYAQ NUMBER SIX THOUSAND;No;0;AL;;;;6000;N;;;;;
1EC92;INDIC SIYAQ NUMBER SEVEN THOUSAND;No;0;AL;;;;7000;N;;;;;
1EC93;INDIC SIYAQ NUMBER EIGHT THOUSAND;No;0;AL;;;;8000;N;;;;;
1EC94;INDIC SIYAQ NUMBER NINE THOUSAND;No;0;AL;;;;9000;N;;;;;
1EC95;INDIC SIYAQ NUMBER TEN THOUSAND;No;0;AL;;;;10000;N;;;;;

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1EC96;INDIC SIYAQ NUMBER TWENTY THOUSAND;No;0;AL;;;20000;N;;;;;
1EC97;INDIC SIYAQ NUMBER THIRTY THOUSAND;No;0;AL;;;30000;N;;;;;
1EC98;INDIC SIYAQ NUMBER FORTY THOUSAND;No;0;AL;;;40000;N;;;;;
1EC99;INDIC SIYAQ NUMBER FIFTY THOUSAND;No;0;AL;;;50000;N;;;;;
1EC9A;INDIC SIYAQ NUMBER SIXTY THOUSAND;No;0;AL;;;60000;N;;;;;
1EC9B;INDIC SIYAQ NUMBER SEVENTY THOUSAND;No;0;AL;;;70000;N;;;;;
1EC9C;INDIC SIYAQ NUMBER EIGHTY THOUSAND;No;0;AL;;;80000;N;;;;;
1EC9D;INDIC SIYAQ NUMBER NINETY THOUSAND;No;0;AL;;;90000;N;;;;;
1EC9E;INDIC SIYAQ NUMBER ONE HUNDRED THOUSAND;No;0;AL;;;100000;N;;;;;
1EC9F;INDIC SIYAQ NUMBER LAKH;No;0;AL;;;100000;N;;;;;
1ECA0;INDIC SIYAQ NUMBER LAKHAN;No;0;AL;;;200000;N;;;;;
1ECA1;INDIC SIYAQ LAKH MARK;No;0;AL;;;100000;N;;;;;
1ECA2;INDIC SIYAQ NUMBER KAROR;No;0;AL;;;1000000;N;;;;;
1ECA3;INDIC SIYAQ NUMBER KARORAN;No;0;AL;;;2000000;N;;;;;
1ECA4;INDIC SIYAQ ALTERNATE NUMBER ONE;No;0;AL;;;1;N;;;;;
1ECA5;INDIC SIYAQ ALTERNATE NUMBER TWO;No;0;AL;;;2;N;;;;;
1ECA6;INDIC SIYAQ ALTERNATE NUMBER THREE;No;0;AL;;;3;N;;;;;
1ECA7;INDIC SIYAQ ALTERNATE NUMBER FOUR;No;0;AL;;;4;N;;;;;
1ECA8;INDIC SIYAQ ALTERNATE NUMBER FIVE;No;0;AL;;;5;N;;;;;
1ECA9;INDIC SIYAQ ALTERNATE NUMBER SIX;No;0;AL;;;6;N;;;;;
1ECAA;INDIC SIYAQ ALTERNATE NUMBER SEVEN;No;0;AL;;;7;N;;;;;
1ECAB;INDIC SIYAQ ALTERNATE NUMBER EIGHT;No;0;AL;;;8;N;;;;;
1ECAC;INDIC SIYAQ ALTERNATE NUMBER NINE;No;0;AL;;;9;N;;;;;
1ECAD;INDIC SIYAQ PLACEHOLDER;So;0;AL;;;N;;;;;
1ECAE;INDIC SIYAQ FRACTION ONE QUARTER;No;0;AL;;;1/4;N;;;;;
1ECAF;INDIC SIYAQ FRACTION ONE HALF;No;0;AL;;;1/2;N;;;;;
1ECB0;INDIC SIYAQ FRACTION THREE QUARTERS;No;0;AL;;;3/4;N;;;;;
1ECB1;INDIC SIYAQ RUPEE MARK;Sc;0;AL;;;N;;;;;

```

Linebreaking Linebreaking properties in the format of LineBreak.txt:

```

1CE71..1ECAD;AL # No [60] INDIC SIYAQ NUMBER ONE .. ALTERNATE NUMBER NINE
1ECAE..1ECB0;AL # No [3] INDIC SIYAQ FRACTION ONE QUARTER .. FRACTION THREE QUARTERS
1ECB1;PO # Sc INDIC SIYAQ RUPEE MARK

```

Script Extensions The following Arabic characters should be specific as extensions to the Indic Siyaq Numbers block:

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0660..0669; # Nd [10] ARABIC-INDIC DIGIT ZERO..ARABIC-INDIC DIGIT NINE

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Confusion Data Given below are Arabic sequences that may mimic Indic Siyaq Numbers:

Indic Siyaq Numbers	Arabic
NUMBER ONE	; AIN, DOTLESS BEH, SAD
NUMBER TWO	; AIN, DOTLESS BEH, SAD, ALEF
NUMBER THREE	; DOTLESS BEH, DOTLESS BEH, YEH BARREE
NUMBER FOUR	; LAM, LAM, AIN
NUMBER FIVE	; SAD, HEH GOAL
NUMBER SIX	; LAM, YEH BARREE
NUMBER SEVEN	; HEH GOAL, AIN
NUMBER EIGHT	; HEH GOAL, YEH BARREE
NUMBER NINE	; LAM, AIN
NUMBER TEN	; AIN, NOON GHUNNA
NUMBER TWENTY	; AIN, DOTLESS BEH, NOON GHUNNA
NUMBER THIRTY	; DOTLESS BEH, DOTLESS BEH, NOON GHUNNA
NUMBER FORTY	; LAM, LAM, AIN, NOON GHUNNA
NUMBER FIFTY	; SAD, NOON GHUNNA

NUMBER SIXTY	; TATWEEL, NOON GHUNNA
NUMBER SEVENTY	; HEH GOAL, AIN, NOON GHUNNA
NUMBER EIGHTY	; LAM, NOON GHUNNA
NUMBER NINETY	; LAM, AIN, NOON GHUNNA
NUMBER ONE HUNDRED	; MEEM, ALEF
NUMBER TWO HUNDRED	; MEEM, ALEF, LAM, HEH GOAL
NUMBER THREE HUNDRED	; SEEN, MEEM, ALEF
NUMBER FOUR HUNDRED	; ALEF, AIN, MEEM, ALEF
NUMBER FIVE HUNDRED	; SAD, MEEM, ALEF
NUMBER SIX HUNDRED	; SEEN, TATWEEL, MEEM, ALEF
NUMBER SEVEN HUNDRED	; LAM, MEEM, ALEF
NUMBER EIGHT HUNDRED	; LAM, MEEM, ALEF
NUMBER NINE HUNDRED	; LAAM, AIN, MEEM, ALEF
NUMBER ONE THOUSAND	; ALEF, LAM, TATWEEL
NUMBER TWO THOUSAND	; AIN, DOTLESS BEH, TATWEEL
NUMBER THREE THOUSAND	; DOTLESS BEH, DOTLESS BEH, TATWEEL
NUMBER FOUR THOUSAND	; LAM, LAM, AIN, TATWEEL
NUMBER FIVE THOUSAND	; SAD, TATWEEL
NUMBER SIX THOUSAND	; SEEN, TATWEEL
NUMBER SEVEN THOUSAND	; HEH GOAL, AIN, TATWEEL
NUMBER EIGHT THOUSAND	; HEH GOAL, TATWEEL
NUMBER NINE THOUSAND	; LAM, AIN, TATWEEL
NUMBER TEN THOUSAND	; AIN, TATWEEL
NUMBER TWENTY THOUSAND	; AIN, DOTLESS BEH, TATWEEL
NUMBER THIRTY THOUSAND	; DOTLESS BEH, DOTLESS BEH, TATWEEL
NUMBER FORTY THOUSAND	; LAM, LAM, AIN, TATWEEL
NUMBER FIFTY THOUSAND	; SAD, TATWEEL
NUMBER SIXTY THOUSAND	; SEEN, TATWEEL
NUMBER SEVENTY THOUSAND	; HEH GOAL, AIN, TATWEEL
NUMBER EIGHTY THOUSAND	; HEH GOAL, TATWEEL
NUMBER NINETY THOUSAND	; LAM, AIN, TATWEEL
NUMBER ONE HUNDRED THOUSAND	; LAM, LAM, TATWEEL
NUMBER LAKH	; LAM, KEHEH, HEH GOAL
NUMBER LAKHAN	; LAM, KEHEH, HEH GOAL, ALEF, NOON
LAKH MARK	; LAM, KEHEH
NUMBER KAROR	; KEHEH, REH, WAW, REH
NUMBER KARORAN	; KEHEH, REH, WAW, REH, ALEF, NOON
ALTERNATE NUMBER ONE	; LAM, HEH GOAL
ALTERNATE NUMBER TWO	; AIN, TATWEEL
ALTERNATE NUMBER THREE	; DOTLESS BEH, DOTLESS BEH, TATWEEL
ALTERNATE NUMBER FOUR	; LAM, LAM, AIN, TATWEEL
ALTERNATE NUMBER FIVE	; SAD, TATWEEL
ALTERNATE NUMBER SIX	; SEEN, TATWEEL
ALTERNATE NUMBER SEVEN	; HEH GOAL, AIN, TATWEEL
ALTERNATE NUMBER EIGHT	; HEH GOAL, TATWEEL
ALTERNATE NUMBER NINE	; LAM, AIN, TATWEEL
PLACEHOLDER	; SHADDA
FRACTION ONE QUARTER	; FULL STOP
FRACTION ONE HALF	; EXTENDED ARABIC-INDIC DIGIT ZERO
FRACTION THREE QUARTERS	; FULL STOP, EXTENDED ARABIC-INDIC DIGIT ZERO
RUPEE MARK	; DATE SEPARATOR

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	1EC7	1EC8	1EC9	1ECA	1ECB
0		موه 1EC80	صم 1EC90	لکھان 1ECA0	ن 1ECB0
1	عمم 1EC71	له 1EC81	سم 1EC91	لک 1ECA1	/ 1ECB1
2	عمما 1EC72	لوه 1EC82	معم 1EC92	کرور 1ECA2	
3	سے 1EC73	ما 1EC83	سم 1EC93	کرور 1ECA3	
4	للوہ 1EC74	مالہ 1EC84	لعم 1EC94	لہ 1ECA4	
5	صہ 1EC75	سما 1EC85	ع 1EC95	ع 1ECA5	
6	لے 1EC76	اعما 1EC86	ع 1EC96	ع 1ECA6	
7	موہ 1EC77	صما 1EC87	لعم 1EC97	لعم 1ECA7	
8	مے 1EC78	سما 1EC88	لعم 1EC98	ص 1ECA8	
9	لوہ 1EC79	لما 1EC89	ص 1EC99	ص 1ECA9	
A	عہ 1EC7A	لہا 1EC8A	ل 1EC9A	موہ 1ECAA	
B	عہ 1EC7B	لعمما 1EC8B	موہ 1EC9B	ل 1ECAB	
C	سہ 1EC7C	ل 1EC8C	ل 1EC9C	لوہ 1ECAC	
D	للوہ 1EC7D	لعم 1EC8D	لوہ 1EC9D	س 1ECAD	
E	صہ 1EC7E	سم 1EC8E	لل 1EC9E	- 1ECAE	
F	سہ 1EC7F	لعم 1EC8F	لکھ 1EC9F	• 1ECAF	

The Indic Siyaq Numbers are also known as 'Raqm' or 'Rakam' numbers.

Primary numbers

1EC71	١	INDIC SIYAQ NUMBER ONE
1EC72	٢	INDIC SIYAQ NUMBER TWO
1EC73	٣	INDIC SIYAQ NUMBER THREE
1EC74	٤	INDIC SIYAQ NUMBER FOUR
1EC75	٥	INDIC SIYAQ NUMBER FIVE
1EC76	٦	INDIC SIYAQ NUMBER SIX
1EC77	٧	INDIC SIYAQ NUMBER SEVEN
1EC78	٨	INDIC SIYAQ NUMBER EIGHT
1EC79	٩	INDIC SIYAQ NUMBER NINE

Tens

1EC7A	١٠	INDIC SIYAQ NUMBER TEN
1EC7B	٢٠	INDIC SIYAQ NUMBER TWENTY
1EC7C	٣٠	INDIC SIYAQ NUMBER THIRTY
1EC7D	٤٠	INDIC SIYAQ NUMBER FORTY
1EC7E	٥٠	INDIC SIYAQ NUMBER FIFTY
1EC7F	٦٠	INDIC SIYAQ NUMBER SIXTY
1EC80	٧٠	INDIC SIYAQ NUMBER SEVENTY
1EC81	٨٠	INDIC SIYAQ NUMBER EIGHTY
1EC82	٩٠	INDIC SIYAQ NUMBER NINETY

Hundreds

1EC83	١٠٠	INDIC SIYAQ NUMBER ONE HUNDRED
1EC84	٢٠٠	INDIC SIYAQ NUMBER TWO HUNDRED
1EC85	٣٠٠	INDIC SIYAQ NUMBER THREE HUNDRED
1EC86	٤٠٠	INDIC SIYAQ NUMBER FOUR HUNDRED
1EC87	٥٠٠	INDIC SIYAQ NUMBER FIVE HUNDRED
1EC88	٦٠٠	INDIC SIYAQ NUMBER SIX HUNDRED
1EC89	٧٠٠	INDIC SIYAQ NUMBER SEVEN HUNDRED
1EC8A	٨٠٠	INDIC SIYAQ NUMBER EIGHT HUNDRED
1EC8B	٩٠٠	INDIC SIYAQ NUMBER NINE HUNDRED

Thousands

1EC8C	١٠٠٠	INDIC SIYAQ NUMBER ONE THOUSAND
		• used as a unit mark for the thousands in the Deccani style
1EC8D	٢٠٠٠	INDIC SIYAQ NUMBER TWO THOUSAND
1EC8E	٣٠٠٠	INDIC SIYAQ NUMBER THREE THOUSAND
1EC8F	٤٠٠٠	INDIC SIYAQ NUMBER FOUR THOUSAND
1EC90	٥٠٠٠	INDIC SIYAQ NUMBER FIVE THOUSAND
1EC91	٦٠٠٠	INDIC SIYAQ NUMBER SIX THOUSAND
1EC92	٧٠٠٠	INDIC SIYAQ NUMBER SEVEN THOUSAND
1EC93	٨٠٠٠	INDIC SIYAQ NUMBER EIGHT THOUSAND
1EC94	٩٠٠٠	INDIC SIYAQ NUMBER NINE THOUSAND

Ten thousands

Also used as alternate forms for the tens when writing tens of lakhs and tens of crores

1EC95	١٠٠٠٠	INDIC SIYAQ NUMBER TEN THOUSAND
1EC96	٢٠٠٠٠	INDIC SIYAQ NUMBER TWENTY THOUSAND
1EC97	٣٠٠٠٠	INDIC SIYAQ NUMBER THIRTY THOUSAND
1EC98	٤٠٠٠٠	INDIC SIYAQ NUMBER FORTY THOUSAND
1EC99	٥٠٠٠٠	INDIC SIYAQ NUMBER FIFTY THOUSAND
1EC9A	٦٠٠٠٠	INDIC SIYAQ NUMBER SIXTY THOUSAND
1EC9B	٧٠٠٠٠	INDIC SIYAQ NUMBER SEVENTY THOUSAND
1EC9C	٨٠٠٠٠	INDIC SIYAQ NUMBER EIGHTY THOUSAND
1EC9D	٩٠٠٠٠	INDIC SIYAQ NUMBER NINETY THOUSAND

Hundred thousand

1EC9E	١٠٠٠٠٠	INDIC SIYAQ NUMBER ONE HUNDRED THOUSAND
		• used in the Deccani style

Lakhs

Used for the hundred thousands and primary millions

1EC9F	لکھ	INDIC SIYAQ NUMBER LAKH
		= 1 lakh
		= 100,000
1ECA0	لکھان	INDIC SIYAQ NUMBER LAKHAN
		= 2 lakh
		= 200,000
1ECA1	لکھ	INDIC SIYAQ LAKH MARK
		= lakh multiplier

Crores

Used for the ten millions and higher orders

1ECA2	کروڑ	INDIC SIYAQ NUMBER KAROR
		= 1 crore
		= 10 million
		= 100 lakh
		• used as a mark for denoting crores
1ECA3	کروڑان	INDIC SIYAQ NUMBER KARORAN
		= 2 crore
		= 20 million
		= 200 lakh

Alternate forms of primary numbers

Used for representing multiples of the primary units

1ECA4	١	INDIC SIYAQ ALTERNATE NUMBER ONE
1ECA5	٢	INDIC SIYAQ ALTERNATE NUMBER TWO
1ECA6	٣	INDIC SIYAQ ALTERNATE NUMBER THREE
1ECA7	٤	INDIC SIYAQ ALTERNATE NUMBER FOUR
1ECA8	٥	INDIC SIYAQ ALTERNATE NUMBER FIVE
1ECA9	٦	INDIC SIYAQ ALTERNATE NUMBER SIX
1ECAA	٧	INDIC SIYAQ ALTERNATE NUMBER SEVEN
1ECAB	٨	INDIC SIYAQ ALTERNATE NUMBER EIGHT
1ECAC	٩	INDIC SIYAQ ALTERNATE NUMBER NINE

Placeholder

1ECAD	؀	INDIC SIYAQ PLACEHOLDER
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Fractions

1ECAE	¼	INDIC SIYAQ FRACTION ONE QUARTER
1ECAF	½	INDIC SIYAQ FRACTION ONE HALF
1ECB0	¾	INDIC SIYAQ FRACTION THREE QUARTERS

Currency sign

1ECB1	₹	INDIC SIYAQ RUPEE MARK
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	x1	x10	x100	x1,000	x10,000	x100,000	x1,000,000	x10,000,000
1	عصم	عہ	ما	ال	ع	لکھہ	لکے	کرور
2	عفا	عہ	مالہ	اعم	ع	لکھان	لکے	کروراں
3	سے	سہ	سما	سم	س	سے لک	سے لکے	سے کرور
4	للوہ	للوہ	اعما	للع	للو	للوہ لک	للوہ لکے	للوہ کرور
5	صہ	صہ	صما	صم	ص	صہ لک	صہ لکے	صہ کرور
6	لے	لہ	سما	سم	س	لے لک	لے لکے	لے کرور
7	موہ	موہ	لما	مم	م	موہ لک	موہ لکے	موہ کرور
8	مے	لہ	لما	مم	م	مے لک	مے لکے	مے کرور
9	لوہ	لوہ	لعما	للع	لو	لوہ لک	لوہ لکے	لوہ کرور

Table 1: Indic forms of the Siyaq numbers for eight decimal orders.

RAQAM.

This is the method universally employed by nations using the Arabic character for recording pecuniary transactions, and for noting all computations of weight and measure. The word *raqam* denotes “marking,” “noting,” “writing,” and is used for the “price-mark” placed on an article to express its value. The symbols themselves are merely abbreviations of the Arabic words denoting numbers; and, notwithstanding their apparent complexity, are exceedingly simple when their characteristic features are recognized. The *raqam* symbols from 1 to 10 are abbreviations of the Arabic words. Thus 1 is expressed by عدد “number,” with a final stroke implying “unity”; 2 is represented by the dual form عددان; 3 is لثلاث; 4 is ربيع; 5 is خمس; 6 is سبعمائة; 7 is سبع; 8 is ثمانين; 9 is تسع; 10 is عشرة. As the symbols are Shikasta forms of these words they are written from right to left; and the initial of each is its characteristic feature. In forming the symbols from 11 to 19, the representative of 10 is written with the characteristic feature of each unit running out into a streak underneath. These symbols, therefore, may be read as 10+1, 10+2, 10+3, &c. The figure 20 is represented by the characteristic feature of 2 prefixed to the final of the symbol for 10, and thus simply enough indicates “double ten.” The units are placed under this, as before, to express “double 10+1,” up to “double 10+9.” The characteristic features of 3, 4, 5, 6, 7, 8, and 9, are prefixed to the final of 10, to render the numbers 30, 40, 50, &c.; and the units are run under each, as before explained, to express the intermediate numbers, up to 99. The figure 100 is an abbreviation of the Arabic word مائة; and the same process of prefixing the characteristic features of the units, carries us up to 900. These symbols are placed at the right-hand side of the lesser numbers; thus 123 would be written $\overset{20}{3}.100$. The symbol for 1000 is the Arabic word الف; and the usual modifications of its initial part carry the numeration up to 90,000. The representatives of thousands are placed to the right of those representing hundreds; thus, 1125 would appear as $\overset{20}{5}.100.1000$. To express numbers beyond 90,000 the Indian words لکھ or لاکھ 100,000, and کڑور 10,000,000 have been availed of. The word لکھ is not used alone, but has the figure 1 prefixed, indicating “one lakh”; for 2 lakhs a dual form is improvised, and لکھان is made to express “double lakh.” To render 3 lakhs up to 90 lakhs, first the units, and, in this case, the tens also are run under the primary symbol, until we reach 1 *karor*, and its dual *karoran*, “2 karors,” after which the former process is repeated, if such high numbers are ever required.

It is hoped that the foregoing explanation will simplify what appears to many Europeans to be a puzzling system of notation. A complete table of *raqam* figures is here added.

Figure 1: Description of Siyaq notation (from Palmer 1886: 39, 40). The table of *raqam* referred to in the last paragraph is the same as that given by Stewart (1825), shown here in figure 6.

2 TABLE OF FIGURES.

Rekem.	Hind.	Rekem.	Hind.
۱	21	۱	1
۲	22	۲	2
۳	23	۳	3
۴	24	۴	4
۵	25	۵	5
۶	26	۶	6
۷	27	۷	7
۸	28	۸	8
۹	29	۹	9
۱۰	30	۱۰	10
۱۱	31	۱۱	11
۱۲	32	۱۲	12
۱۳	33	۱۳	13
۱۴	34	۱۴	14
۱۵	35	۱۵	15
۱۶	36	۱۶	16
۱۷	37	۱۷	17
۱۸	38	۱۸	18
۱۹	39	۱۹	19
۲۰	40	۲۰	20

TABLE OF FIGURES. 3

Rekem.	Hind.	Rekem.	Hind.
۶۱	61	۶۱	41
۶۲	62	۶۲	42
۶۳	63	۶۳	43
۶۴	64	۶۴	44
۶۵	65	۶۵	45
۶۶	66	۶۶	46
۶۷	67	۶۷	47
۶۸	68	۶۸	48
۶۹	69	۶۹	49
۷۰	70	۷۰	50
۷۱	71	۷۱	51
۷۲	72	۷۲	52
۷۳	73	۷۳	53
۷۴	74	۷۴	54
۷۵	75	۷۵	55
۷۶	76	۷۶	56
۷۷	77	۷۷	57
۷۸	78	۷۸	58
۷۹	79	۷۹	59
۸۰	80	۸۰	60

Figure 2: Printed forms of Indic Siyaq Numbers (from Gladwin 1790: 2, 3).

4 TABLE OF FIGURES.

Rekem.	Hind.		Rekem.	Hind.	
٥٠٠	500	٥٠٠	٨١	81	
٦٠٠	600	٦٠٠	٨٢	82	
٧٠٠	700	٧٠٠	٨٣	83	
٨٠٠	800	٨٠٠	٨٤	84	
٩٠٠	900	٩٠٠	٨٥	85	
١٠٠٠	1000	١٠٠٠	٨٦	86	
٢٠٠٠	2000	٢٠٠٠	٨٧	87	
٣٠٠٠	3000	٣٠٠٠	٨٨	88	
٤٠٠٠	4000	٤٠٠٠	٨٩	89	
٥٠٠٠	5000	٥٠٠٠	٩٠	90	
٦٠٠٠	6000	٦٠٠٠	٩١	91	
٧٠٠٠	7000	٧٠٠٠	٩٢	92	
٨٠٠٠	8000	٨٠٠٠	٩٣	93	
٩٠٠٠	9000	٩٠٠٠	٩٤	94	
١٠٠٠٠	10,000	١٠٠٠٠	٩٥	95	
٢٠٠٠٠	20,000	٢٠٠٠٠	٩٦	96	
٣٠٠٠٠	30,000	٣٠٠٠٠	٩٧	97	
٤٠٠٠٠	40,000	٤٠٠٠٠	٩٨	98	
٥٠٠٠٠	50,000	٥٠٠٠٠	٩٩	99	
٦٠٠٠٠	60,000	٦٠٠٠٠	١٠٠	100	
٧٠٠٠٠	70,000	٧٠٠٠٠	٢٠٠	200	
٨٠٠٠٠	80,000	٨٠٠٠٠	٣٠٠	300	
٩٠٠٠٠	90,000	٩٠٠٠٠	٤٠٠	400	

Figure 3: Metal types showing forms of the ten thousands that are elongations of the alternate forms for the primary numbers (from Gladwin 1790: 4).

TABLE OF FIGURES. 5

Cowrit.	Gundabs.	Gundabs.	Annas.
$\frac{1}{4}$ — 1	17/ 16	✓ 1	/ 1 1
$\frac{1}{2}$ • 2	17/ 17	✓ 2	/ 2 2
$\frac{3}{4}$ — 3	17/ 18	✓ 3	/ 3 3
	19/ 19	✓ 4	/ 4 4
		✓ 5	/ 5 5
		✓ 6	/ 6 6
		✓ 7	/ 7 7
		✓ 8	/ 8 8
		✓ 9	/ 9 9
		✓ 10	/ 10 10
		✓ 11	/ 11 11
		✓ 12	/ 12 12
		✓ 13	/ 13 13
		✓ 14	/ 14 14
		✓ 15	/ 15 15

Observe, that Annas are distinguished from Gundabs by the stroke being placed to the left of the former, and on the right side of the latter.

Figure 4: Printed forms of Indic Siyaq Numbers (from Gladwin 1790: 5)

The *Rekem*, or *Siyak* characters, being only contractions of *Arabic* words, the following Table may serve to impress them on the memory.

Arabic Words.	Rekem.		Arabic Words.	Rekem.		Arabic Words.	Rekem.		
							joined.	separate.	
عشر	ع	10	احد عشر	لع	11	ع د	له	عند	1
عشرين	عم	20	اثنا عشر	لع	12	ع د و ان	ك	عندك	2
ثلاثين	مم	30	ثالثه عشر	لم	13	ثالثه	م	لعمري	3
اربعين	للع	40	اربعه عشر	للع	14	اربعه	للع	لعمري	4
خمسين	صم	50	خمسه عشر	لم	15	خمسه	ص	لعمري	5
ستين	لم	60	سته عشر	لم	16	سته	ا	لعمري	6
سبعين	مم	70	سبعه عشر	لم	17	سبعه	م	لعمري	7
ثمانين	له	80	ثمانيه عشر	لم	18	ثمانيه	م	لعمري	8
تسعين	له	90	تسعه عشر	لع	19	تسعه	ل	لعمري	9

NOTE.		Arabic Words.	Rekem.		Arabic Words.	Rekem.	
It is necessary to remark regarding the two first digits, that when combined with tens, ل is a contraction of واحد, and ك of اثنا		الف	الف	1000	مايه	ما	100
		الفان	الفان	2000	مايه تان	ما	200
		ثالثه آلاف	الف	3000	ثالثه مايه	عما	300
		اربعه آلاف	الف	4000	اربعه مايه	اعما	400
		خمسه آلاف	الف	5000	خمسه مايه	عما	500
		سته آلاف	الف	6000	سته مايه	كما	600
		سبعه آلاف	الف	7000	سبعه مايه	لما	700
		ثمانيه آلاف	الف	8000	ثمانيه مايه	لا	800
		تسعه آلاف	الف	9000	تسعه مايه	لما	900

Figure 5: Table showing the Arabic sources of Siyaq forms (from Gladwin 1790: 6–7).

मोलाद

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13
39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54
79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84
3,000	2,000	1,000	900	800	700	600	500	400	300	200	100	100	100	100	100
40,000	30,000	20,000	10,000	9,000	8,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000	100,000	100,000	100,000
500,000	400,000	300,000	200,000	100,000	90,000	80,000	70,000	60,000	50,000	40,000	30,000	20,000	100,000	100,000	100,000
5,000,000	4,000,000	3,000,000	2,000,000	1,000,000	900,000	800,000	700,000	600,000	500,000	400,000	300,000	200,000	100,000	100,000	100,000
20,000,000	10,000,000	9,000,000	8,000,000	7,000,000	6,000,000	5,000,000	4,000,000	3,000,000	2,000,000	1,000,000	100,000	100,000	100,000	100,000	100,000

Figure 6: Table showing Siyaq forms as used in South Asia (from Stewart 1825: Plate 7).

Table of Rakm.											
رقم	تعداد	رقم	تعداد	رقم	تعداد	رقم	تعداد	رقم	تعداد	رقم	تعداد
۱	۱	۱۰۰	۱۰۰	۲۰	۲۰	۳۰	۳۰	۴۰	۴۰	۵۰	۵۰
۲	۲	۱۰۱	۱۰۱	۲۱	۲۱	۳۱	۳۱	۴۱	۴۱	۵۱	۵۱
۳	۳	۱۰۲	۱۰۲	۲۲	۲۲	۳۲	۳۲	۴۲	۴۲	۵۲	۵۲
۴	۴	۱۰۳	۱۰۳	۲۳	۲۳	۳۳	۳۳	۴۳	۴۳	۵۳	۵۳
۵	۵	۱۰۴	۱۰۴	۲۴	۲۴	۳۴	۳۴	۴۴	۴۴	۵۴	۵۴
۶	۶	۱۰۵	۱۰۵	۲۵	۲۵	۳۵	۳۵	۴۵	۴۵	۵۵	۵۵
۷	۷	۱۰۶	۱۰۶	۲۶	۲۶	۳۶	۳۶	۴۶	۴۶	۵۶	۵۶
۸	۸	۱۰۷	۱۰۷	۲۷	۲۷	۳۷	۳۷	۴۷	۴۷	۵۷	۵۷
۹	۹	۱۰۸	۱۰۸	۲۸	۲۸	۳۸	۳۸	۴۸	۴۸	۵۸	۵۸
۱۰	۱۰	۱۰۹	۱۰۹	۲۹	۲۹	۳۹	۳۹	۴۹	۴۹	۵۹	۵۹
۱۱	۱۱	۱۱۰	۱۱۰	۳۰	۳۰	۴۰	۴۰	۵۰	۵۰	۶۰	۶۰
۱۲	۱۲	۱۱۱	۱۱۱	۳۱	۳۱	۴۱	۴۱	۵۱	۵۱	۶۱	۶۱
۱۳	۱۳	۱۱۲	۱۱۲	۳۲	۳۲	۴۲	۴۲	۵۲	۵۲	۶۲	۶۲
۱۴	۱۴	۱۱۳	۱۱۳	۳۳	۳۳	۴۳	۴۳	۵۳	۵۳	۶۳	۶۳
۱۵	۱۵	۱۱۴	۱۱۴	۳۴	۳۴	۴۴	۴۴	۵۴	۵۴	۶۴	۶۴
۱۶	۱۶	۱۱۵	۱۱۵	۳۵	۳۵	۴۵	۴۵	۵۵	۵۵	۶۵	۶۵
۱۷	۱۷	۱۱۶	۱۱۶	۳۶	۳۶	۴۶	۴۶	۵۶	۵۶	۶۶	۶۶
۱۸	۱۸	۱۱۷	۱۱۷	۳۷	۳۷	۴۷	۴۷	۵۷	۵۷	۶۷	۶۷
۱۹	۱۹	۱۱۸	۱۱۸	۳۸	۳۸	۴۸	۴۸	۵۸	۵۸	۶۸	۶۸
۲۰	۲۰	۱۱۹	۱۱۹	۳۹	۳۹	۴۹	۴۹	۵۹	۵۹	۶۹	۶۹
۲۱	۲۱	۱۲۰	۱۲۰	۴۰	۴۰	۵۰	۵۰	۶۰	۶۰	۷۰	۷۰

$\frac{1}{4}$ of an ānā; $\frac{1}{2}$ an ānā; $\frac{3}{4}$ of an ānā; one ānā
 Rs. As. $\frac{3}{4}$ = 1125, 11, 8 $\frac{3}{4}$ Rs. As. = 795, 11 $\frac{3}{4}$
 "مار سے ۱۱۰۰ پائی" "مار سے ۱۰"

Figure 7: Table showing Indic Siyaq Numbers (from Platts 1909: 60). It should be noted that the values of the examples shown at the bottom of the table may be incorrect. The example to the right, “مار سے ۱۰” is given the value “Rs. 795, As. 11^{3/4}”; the actual value is “Rs. 297, As. 10”. There is a slight error in the example on the left, “مار سے ۱۱۰۰ پائی”, which is given the value “Rs. 1125, As. 11, Pai 8^{3/4}”; the actual value is “Rs. 1125, As. 11, Pai 8^{1/2}”.

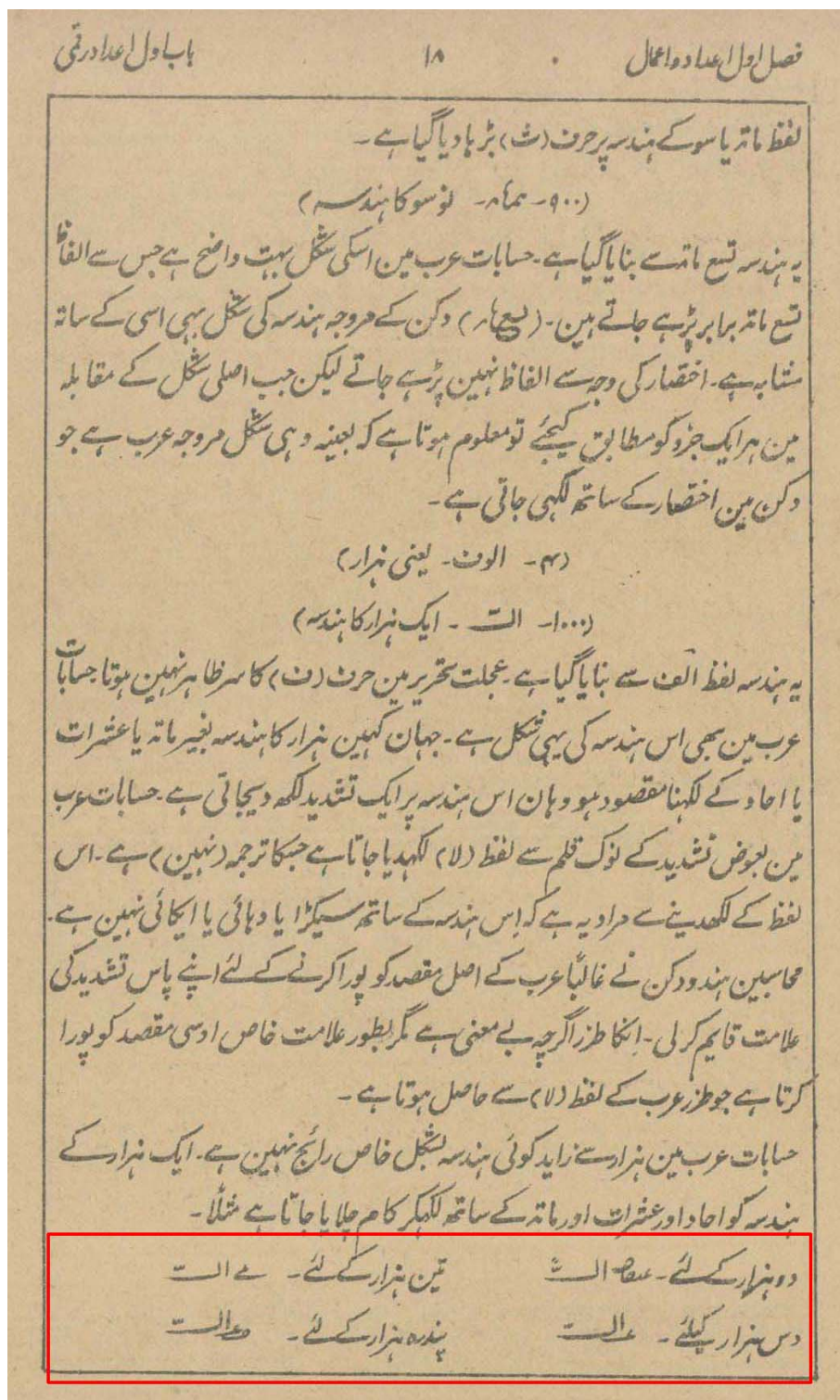


Figure 8: Deccani style for writing the thousands (from Aziz 1894: 18).

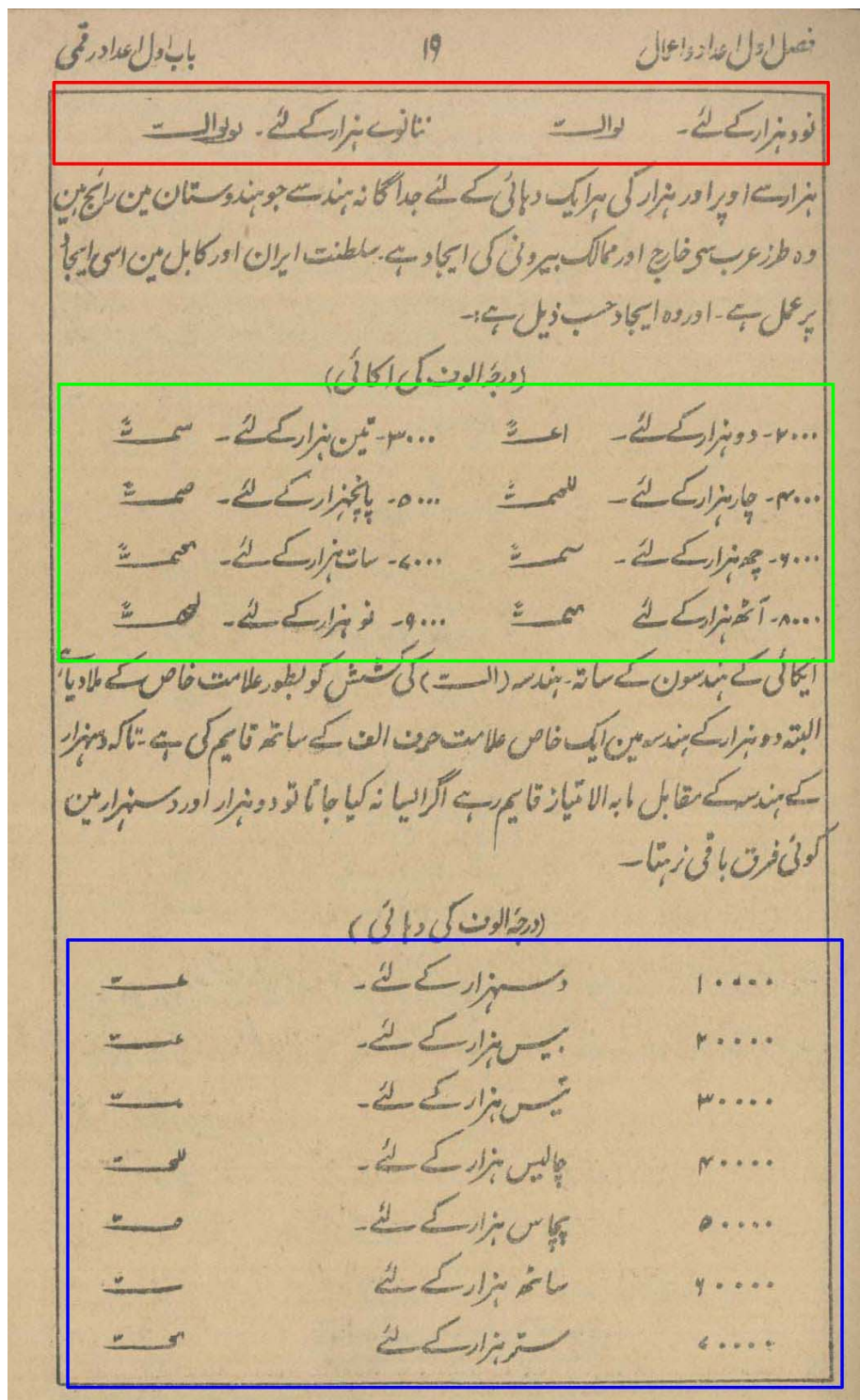


Figure 9: Forms of the thousands (red) in the Deccani style and the regular forms of the thousands (green). The ten thousands is boxed in blue (from Aziz 1894: 19).

فصل اول اعداد و اعمال	۲۰	باب اول اعداد رقمی
۸۰۰۰۰	اسی ہزار کے لئے۔	ت
۹۰۰۰۰	نوسے ہزار کے لئے۔	ت
درجہ الوت کے احاد کو عشرات کے ساتھ اسی طریقے سے لایا جاتا ہے جس طریقے سے عنوان نمبر (۲۰) میں دہائی کے ساتھ لایا ہے ملاحظہ ہو تمثیل ذیل :-		
۱۱۰۰۰۰	گیارہ ہزار کے لئے۔	ت
۱۲۰۰۰۰	بارہ ہزار کے لئے۔	ت
۱۳۰۰۰۰	تیرہ ہزار کے لئے۔	ت
۱۴۰۰۰۰	چودہ ہزار کے لئے۔	ت
۱۵۰۰۰۰	پندرہ ہزار کے لئے۔	ت
۱۶۰۰۰۰	سولہ ہزار کے لئے۔	ت
۱۷۰۰۰۰	سترہ ہزار کے لئے۔	ت
۱۸۰۰۰۰	اٹھارہ ہزار کے لئے۔	ت
۱۹۰۰۰۰	اویس ہزار کے لئے۔	ت
(۵) ماہ الف - لاکھ		
زبان عرب میں لاکھ کے لئے کوئی خاص لفظ نہیں ہے اور نہ واضح نے اسکے لئے کوئی ہند وضع کیا ہے محاسبین دکن اور ہند بھی لفظی طریقہ پر لفظ (لاکھ) کے ساتھ احاد و عشرات کے ہندس لکھتے ہیں۔		
ہندسہ ابجدی	طرز عرب	طرز ہند و دکن
۱۰۰۰۰۰	ماہ الت	لسر
۲۰۰۰۰۰	ماہ الت	مالس یا عطا لسر
۳۰۰۰۰۰	ماہ الت	سے لسر

Figure 10: Method of writing the ten thousands (blue; continued from figure 9), the primary multiples of the ten thousands (green) and lakhs (red) in the Deccani style (from Aziz 1894: 20).

بَاب اول اعداد رقی	۲۱	فصل اول اعداد و اعمال
للو لیس	للیع ارات	۳۰۰۰۰۰
صھ لیس	صھ ارات	۵۰۰۰۰۰
ع لیس	ا ارات	۱۰۰۰۰۰۰
ع لیس	ا ا ارات	۲۰۰۰۰۰۰
للو لیس	ا ا ا ارات	۳۰۰۰۰۰۰
صھ لیس	صھ ا ا ارات	۵۰۰۰۰۰۰
تمثیل ثانی کسرات کے ساتھ		
صھ لیس	ا ا ا ا ا ا ا ا ا ا	۱۵۰۵۸۶
ا ا ا ا ا ا ا ا ا ا	صھ ا ا ا ا ا ا ا ا ا ا	۵۹۶۲۶۸
ا ا ا ا ا ا ا ا ا ا	ا ا ا ا ا ا ا ا ا ا	۲۰۸۰۸۶۲
(۶- کرور)		
<p>کرور کے لئے بھی زبان عرب میں کوئی مخصوص لفظ اور رقی ہندسوں میں کوئی خاص نمبر نہیں ہے۔ اہل ہند ملفوظی طریقہ پر لفظ کرور کے ساتھ رقی اعداد و عشرات کا استعمال کرتے ہیں اور عرب میں اسی طرز پر عمل ہوتا ہے جس طرز پر لاکھ کے متعلق دیکھتے ہیں۔</p>		
طز ہند و دوکن	طز عرب	ہندسہ ابجدی
کرور	صھ ا ا ا ا ا ا ا ا ا ا	۱۰۰۰۰۰۰۰
عاکرور یا صفا کرور	صھ ا ا ا ا ا ا ا ا ا ا	۲۰۰۰۰۰۰۰
صھ کرور	صھ ا ا ا ا ا ا ا ا ا ا	۵۰۰۰۰۰۰۰
ع کرور	صھ ا ا ا ا ا ا ا ا ا ا	۱۰۰۰۰۰۰۰۰
بَاب دوم مراتب اعداد کے متعلق		
<p>رقمی اعداد کی تحریر میں ایجابی - دہائی - سیکڑے - ہزار - لاکھ اور کرور کے مراتب مخصوص ہیں</p>		

Figure 11: Method of writing lakhs (red; continued from figure 10) in the Deccani style and karors (blue) (from Aziz 1894: 21).

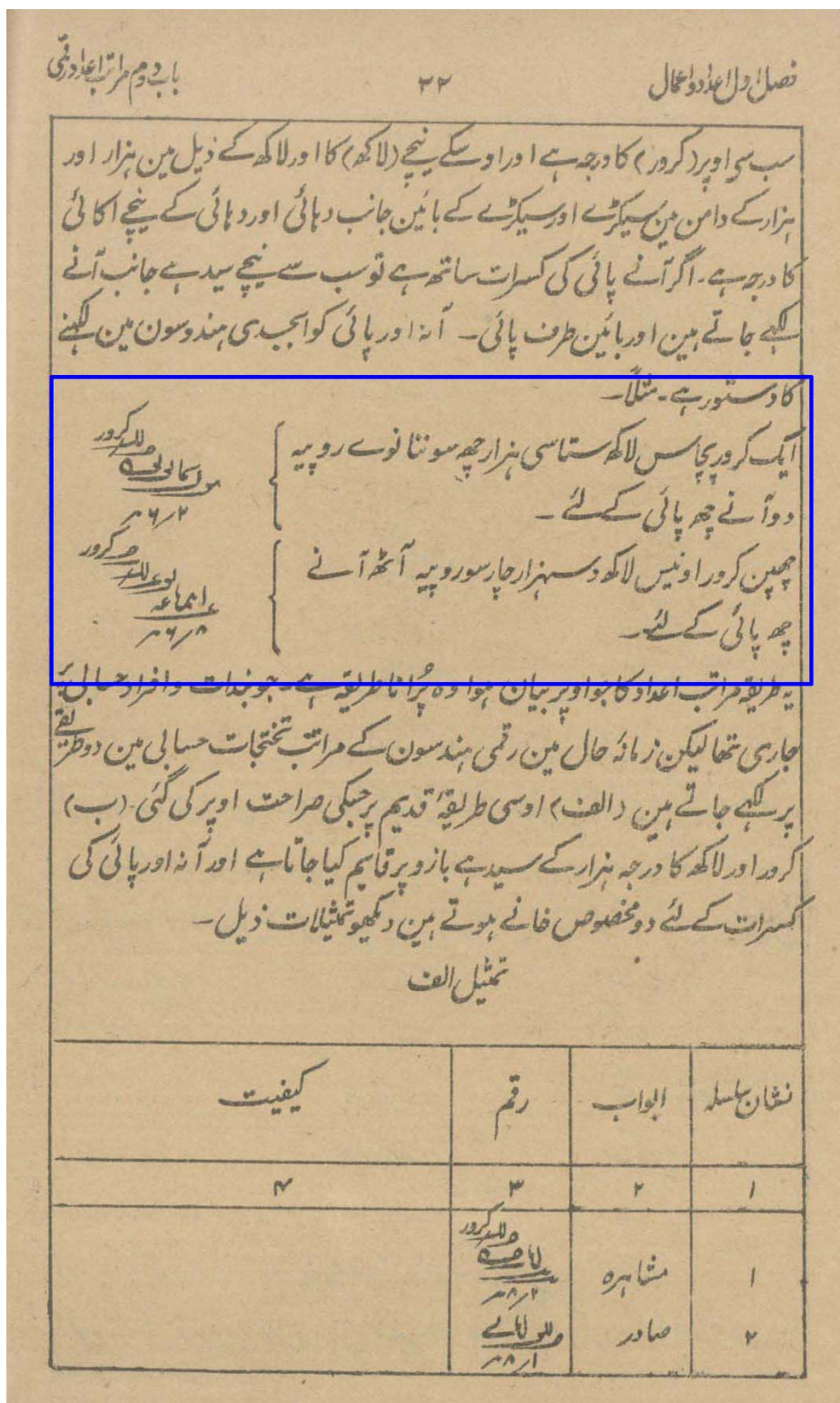


Figure 12: Examples of lakhs and crores written vertically in inverse order (from Aziz 1894: 22).

فصل اول اعداد و اعمال ۲۳ باب دوم مراتب اعداد رقی

تمثیل					
کیفیت	رسم			ابواب	نشان
	پائی	آنہ	روپیہ		
	۸	۲	گردہ لیلہ لیلہ لیلہ لیلہ	مشاہرہ	۱
	۱۱	۱	مذول لیلہ لیلہ لیلہ	صادر	۲
	۹	۸	مذول لیلہ	بھتہ	۳

مراتب اعداد میں غلطی ہونے سے شمار اعداد میں فرق واقع ہوتا ہے مثلاً اگر کسی نے ماٹھے کو بنا لیا تو مراتب اس طرح پر (۱) لکھا تو ترتیب کے اعتبار سے یہ ہندسہ چھاسی ہزار کا سمجھا جاوے گا۔ بناؤ علیہ مراتب اعداد کا لحاظ نہایت ضروری چیز ہے۔

جن اعداد کے مراتب صفر پر مبنی ہوتے ہیں وہ اس وقت تک صحت کے ساتھ نہیں معلوم ہو سکتے جب تک صفر اور مراتب صفر شمار نہ کئے جاوین بر خلاف رقی ہندوں کے جنکو بغیر کسی شمار مراتب کے معلوم کیا جاسکتا ہے کہ یہ ہندسہ فلان رقم کا ہے۔ اور یہ صفت خاص مکتوبی طریقہ کی ہے۔

آنہ اور پائی کی کسرات کا مرتبہ اور بیان ہو چکا ہے لیکن جدید طریقہ کی رو سے آنہ کا اشارہ ایک سادہ مرکز کے ذریعہ سے کیا جاتا ہے اور پائی کا اشارہ بعلامت خاص جیسے ۸۰۰۔ آنہ کی علامت پر جو اشارہ خاص پائی کے لئے بڑھایا گیا ہے وہ درحقیقت لفظ پائی کا سر حرف ہے۔

بعض محاسین انگریزی طریقہ پر آنہ اور پائی کو ایک سادہ مرکز کے دونوں جانب لکھتے ہیں یعنی سیدھے جانب آنہ کا ہندسہ لکھا جاتا ہے۔ بائیں جانب پائی کا ہندسہ۔ جیسے

Figure 13: More examples of complex numbers (from Aziz 1894: 23).

فصل اول اعداد و اعمال ۲۵ باب سوم عمل میزان

کے ذیل میں لکھی جاتی ہے ملاحظہ ہو تمثیل ذیل۔

کیفیت	نظم				البواب	تعداد
	جملہ	متفرقات	صادر	تختواہ		
۷	۶	۵	۴	۳	۲	۱
	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	علاوہ مال گذاری علاوہ بندوبست علاوہ جنگلات علاوہ انعام	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$
	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$	میزان	$\frac{۱۰۰۰}{۱۰۰}$ $\frac{۱۰۰۰}{۱۰۰}$

صحت میزان کی جانچ کا طریقہ | میزان کی صحت کو جانچنے کا عام طریقہ یہ ہے کہ عمل میزانی کو مکرر دیکھ لیا جاوے۔ لیکن بعض نمونوں کی ترتیب خود ایسی ہوتی ہے جس میں صحت عمل کا اطمینان مستوفی کے ذریعہ سے حاصل ہو سکتا ہے۔

مستوفی عربی زبان کا لفظ ہے۔ جسکے لغوی معنی زبان فارسی میں فراگرفتن اور زبان اردو میں پورا لینے کے ہیں۔ مستوفی مجازاً اوس شخص یا اوس آلہ یا طریقہ عمل کو کہہ سکتے ہیں جس سے حساب کی جانچ ہو سکتی ہو۔ اصطلاح سیاق میں مستوفی سے وہ عمل جمع یا تفریق مراد ہے جو میزانی اعداد میں واقع ہو جسکے ذریعہ سے اعداد میزان کی صحت یا غلطی پر اطمینان حاصل کیا جاسکے۔ دیکھو تختہ تذکرہ صدر کی میزان کو جسکے خانہ ہائے ۳ و ۴ و ۵ کا جملہ مساوی ہے۔ رقم خانہ ۶ کے اسی عمل کا نام مستوفی ہے اور بدین وجہ کہ رقم خانہ ہائے

Figure 14: Examples of complex numbers showing currency notation (from Aziz 1894: 25). Note the positioning of small currency units beneath the sequence of Siyaq numbers.

SYMBOL	VALUE	SYMBOL	VALUE	SYMBOL	VALUE
۳	-/-/3	۹	-/-/9	۱/۳	-/1/3
۳۰	-/-/6	۱۰	-/1/-	۱/۶	-/1/6
SYMBOL	VALUE	SYMBOL	VALUE	SYMBOL	VALUE
۱/۹	-/1/9	۱۲	12/-/-	۷۰	70/-/-
۲	-/2/-	۱۳	13/-/-	۸۰	80/-/-
۱	1/-/-	۱۴	14/-/-	۹۰	90/-/-
۲	2/-/-	۱۵	15/-/-	۱۰۰	100/-
۳	3/-/-	۱۶	16/-/-	۲۰۰	200/-
۴	4/-/-	۱۷	17/-/-	۳۰۰	300/-
۵	5/-/-	۱۸	18/-/-	۴۰۰	400/-
۶	6/-/-	۱۹	19/-/-	۵۰۰	500/-
۷	7/-/-	۲۰	20/-/-	۶۰۰	600/-
۸	8/-/-	۳۰	30/-/-	۷۰۰	700/-
۹	9/-/-	۴۰	40/-/-	۸۰۰	800/-
۱۰	10/-/-	۵۰	50/-/-	۹۰۰	900/-
۱۱	11/-/-	۶۰	60/-/-	۱,۰۰۰	1,000/-
				لاکھ	lakh/-

Figure 15: Table showing Indic Siyaq forms (from Barker 1967: 356, 357). Note the methods of writing currency and fractions.

8.6. Sums: Both India and Pakistan now have a decimal coinage system, a rupee being divided into one hundred paises. In Urdu, the decimal point is written as: ؄

.Examples:

$\text{؄}١٥٠ = \text{Re. 1.00}$ $\text{؄}٥٠ = 50 \text{ p.}$ $\text{؄}٠٥ = 5 \text{ p.}$ $\text{؄}١٥١٤ = \text{Rs. 1.14}$

8.7. Before the currency was reformed in the two countries, a rupee was divided into sixteen annas or sixty-four pice (paise). There was then also a different system, besides the numerals, for writing sums.

$\text{؄}١ = \text{Rs. 1/-}$	$\text{؄}٢ = \text{Rs. 2/-}$	$\text{؄}٣ = \text{Rs. 3/-}$
$\text{؄}٤ = \text{Rs. 4/-}$	$\text{؄}٥ = \text{Rs. 5/-}$	$\text{؄}٦ = \text{Rs. 6/-}$
$\text{؄}٧ = \text{Rs. 7/-}$	$\text{؄}٨ = \text{Rs. 8/-}$	$\text{؄}٩ = \text{Rs. 9/-}$
$\text{؄}١٠ = \text{Rs. 10/-}$	$\text{؄}١١ = \text{Rs. 11/-}$	$\text{؄}١٢ = \text{Rs. 12/-}$
$\text{؄}١٣ = \text{Rs. 13/-}$	$\text{؄}١٤ = \text{Rs. 14/-}$	$\text{؄}١٥ = \text{Rs. 15/-}$
$\text{؄}١٦ = \text{Rs. 16/-}$	$\text{؄}١٧ = \text{Rs. 17/-}$	$\text{؄}١٨ = \text{Rs. 18/-}$
$\text{؄}١٩ = \text{Rs. 19/-}$	$\text{؄}٢٠ = \text{Rs. 20/-}$	$\text{؄}٣٠ = \text{Rs. 30/-}$
$\text{؄}٤٠ = \text{Rs. 40/-}$	$\text{؄}٥٠ = \text{Rs. 50/-}$	$\text{؄}٦٠ = \text{Rs. 60/-}$
$\text{؄}٧٠ = \text{Rs. 70/-}$	$\text{؄}٨٠ = \text{Rs. 80/-}$	$\text{؄}٩٠ = \text{Rs. 90/-}$
$\text{؄}١٠٠ = \text{Rs. 100/-}$	$\text{؄}١ = 1/4 \text{ anna or 1 pice}$	
$\text{؄}١/٢ = 1/2 \text{ anna or 2 pice}$	$\text{؄}٣/٤ = 3/4 \text{ anna or 3 pice}$	$\text{؄}١ = 1 \text{ anna}$
$\text{؄}١/٤ = 1 1/4 \text{ annas}$	$\text{؄}١/٢ = 1 1/2 \text{ annas}$	$\text{؄}٢ = 2 \text{ annas}$
$\text{؄}٣ = \text{Rs. 3 and 2 annas \& 3 pice}$		
$\text{؄}٣/٤$		

Figure 16: Table showing Indic Siyaq forms (from Naim 1999: 49, 50).

لفظ جمع اختصار کیا گیا	جو صورت قرار دی گئی
عہد	عہد، عہد
عہد ان	عہد ان
ثلاثہ	ے
اربعہ	للعہ
خمسہ	صہ صہ
ستہ	ے
سبعہ	مہ
ثمانیہ	تہ
تسہ	لہ
عشر	عہ

Figure 17: The Arabic sources of the Indic Siyaq numbers (from Muhazzab 195-?: 51).

رقوم (ر + قو + م)	[اسم - مونث - جمع]
-	رقمیں - ہند سے اور اعداد کی شکلیں، مثلاً -
-	(اردو) ۱، ۲، ۳، ۴، ۵، ۶، ۷، ۸، ۹، ۱۰ -
-	(انگریزی) 1-2-3-4-5-6-7-8-9-10 -
-	عہ - عہ - ے - للعہ - صہ - ے - مہ - مہ - لعہ - عہ -
-	عہ -
-	(رومن) i - ii - iii - iv - v - vi - vii - viii - ix - x -
-	واحد: رقم -

Figure 18: Table showing Indic Siyaq forms (from Muqtadirah Qaumi Zaban 2001: 718).

رقم - ع . اسم مؤنث (۱) حظ - نوشتہ - تحریر (۲) نقش - مہر نشان - چھاپ -
 چھاپا (۳) - ۱) ہندسہ - عدد - روپوں کے وہ نشان یا ہندسے جو ایک
 خاص صورت میں الفاظ کا اختصار کر کے بنائے گئے ہیں جیسے عدد
 کی صورت میں عددوں کا مختصر لکھنا جیسے - ۱) رجبہ لکھنا - ۲) چھہ - ۳) چھہ - ۴) چھہ
 سب سے بڑا نمائندہ نمبر - ۵) تہہ - ۶) تہہ - ۷) تہہ - ۸) تہہ - ۹) تہہ - ۱۰) تہہ - ۱۱) تہہ
 کے ہندسے جو قریب قریب روپوں کے ہندسوں کے مطابق ہیں
 (۱۲) - ۱) ٹوم - زیور - گھنا پانا (۵-۱) سونے کی چڑیا - مالدار آدمی
 دو لقمند (۶-۱) اعجاز - عجیب آدمی چلتا ہوا پیرزہ - چالاک - ہوشیار
 (۷-۱) نوچی - کم سن کسی (۸-۱) جنس - بھانٹ - رقم + ڈھنگ - طو
 طریق (۹-۱) بچی - تشخیص کی شرح - شرح لگان (۱۰-۱) جو اہرات
 جو اہر (۱۱-۱) مال و دولت - جو کھوں - قیمتی چیز +
 لیکے دل آپ جگر چھوڑ گئے سینے میں + ایک رقم یا درسی ایک رقم بھول گئے (دلغہ)
 تمہیں ناز ہو نہ کہو نہ کہہ کر لیا ہے غ کا دل + یہ رقم نہ ہاتھ لگتی نہ یہ افتخار ہوتا

Figure 19: Table showing Siyaq forms as used in South Asia (from Dhillavi 1974: 363).

پرکنہ کا کماری

عس

منقضي لغایت اساتذہ قسط سانوں

عس للہ

وجوہ

آسامی روپیہ افزون

۱۳ سانوں ۶ و عس

۲۵ منہ ۱۰ لکھ

۱۰ لکھ

۶

تیر

۱۰ لکھ

۶

Figure 20: Revenue record from Bengal containing Indic Siyaq Numbers (from Gladwin 1790: 46). Note the ascending vertical manner of writing the Siyaq numbers and the placement of small currency values beneath the numbers.

ميا
 آمدني خزانہ محالات ضلع ساہرس وغیرہ سنہ ۱۹۰۱
 ۱۸ سوال
 یوم الجمعہ
 ۲۹ ماہ بہارون ۱۲ سبتمبر
 تھو
 جاکموان سا کہہ حراچی
 ۱۰
 ۲
 منہا صرف وغیرہ
 ۱۰
 صرف
 کموزن
 عفا
 ۱۰/۹
 ۱۰/۱۳
 سکہ
 لاند
 منہا صرف
 لاند
 سنوات
 لاند
 منہا صرف وغیرہ
 ۱۰/۳
 عفا
 ۱۰/۱۳

Figure 21: Another revenue record from Bengal containing Indic Siyaq Numbers (from Gladwin 1790: 63). Note the ascending vertical manner of writing the Siyaq numbers and the placement of small currency values beneath the numbers.



Figure 22: A one-rupee note from Hyderabad State from 1940 showing numbers written in Indic Siyaq, as well as in the Telugu, Kannada, Devanagari, Arabic, and Latin scripts. The **ع** INDIC SIYAQ NUMBER ONE is shown in the upper right-hand corner of the reverse. Image courtesy of Rezwan Rezack.



Figure 23: A five-rupee note from Hyderabad State from 1940 showing numbers written in Indic Siyaq, as well as in the Telugu, Kannada, Devanagari, Arabic, and Latin scripts. The value / ۵ <INDIC SIYAQ NUMBER FIVE, INDIC SIYAQ RUPEE MARK> is shown on the obverse.



Figure 24: A ten-rupee note from Hyderabad State from 1940 showing numbers written in Indic Siyaq, as well as in the Telugu, Kannada, Devanagari, Arabic, and Latin scripts. The **ع** INDIC SIYAQ NUMBER TEN is shown in the center of the reverse. Image courtesy of Rezwan Rezack.

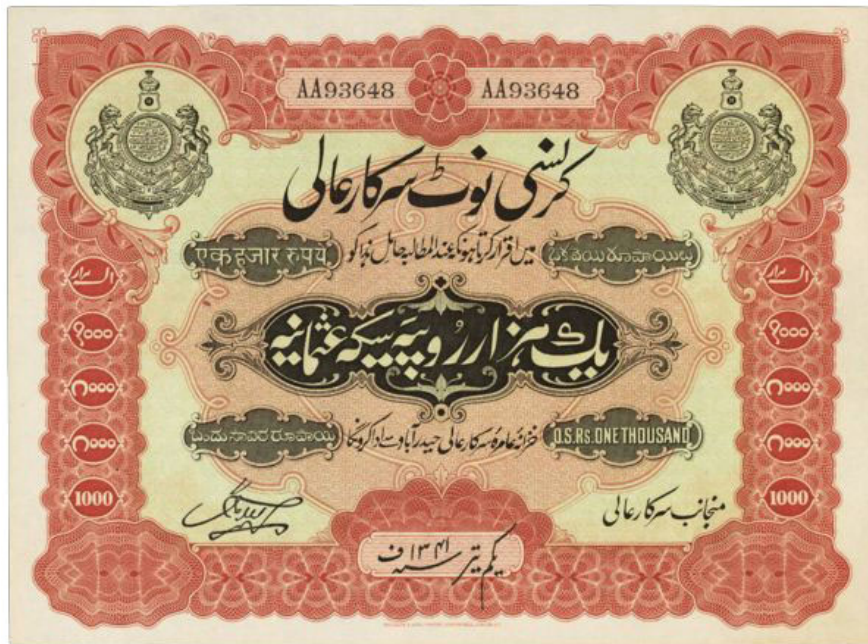


Figure 25: A thousand-rupee note from Hyderabad State from 1940 showing numbers written in Indic Siyaq, as well as in the Telugu, Kannada, Devanagari, Arabic, and Latin scripts. The value 1000 INDIC SIYAQ NUMBER ONE THOUSAND followed by the Urdu هزار (= ہزار) *hazār*, is shown on the front and in the top right corner of the reverse.



Figure 26: A sixty rupee stamp paper from 1807. The value 60 INDIC SIYAQ NUMBER SIXTY is shown in the stamp.

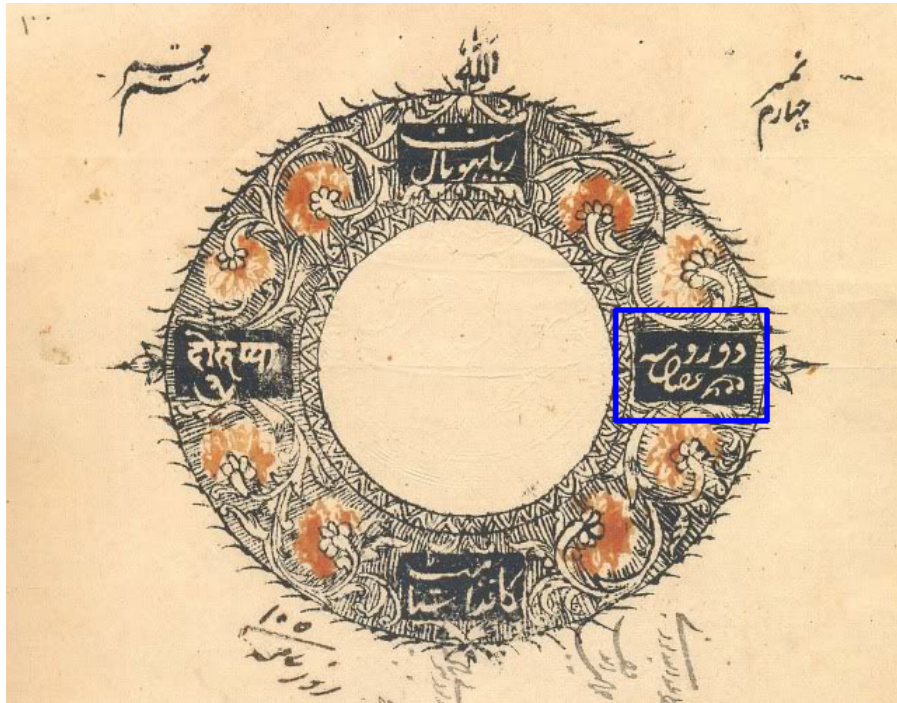


Figure 28: A two anna stamp paper from Bhopal State. The number two is written using the stylistic alternate عما of عما INDIC SIYAQ NUMBER TWO is shown in the stamp.

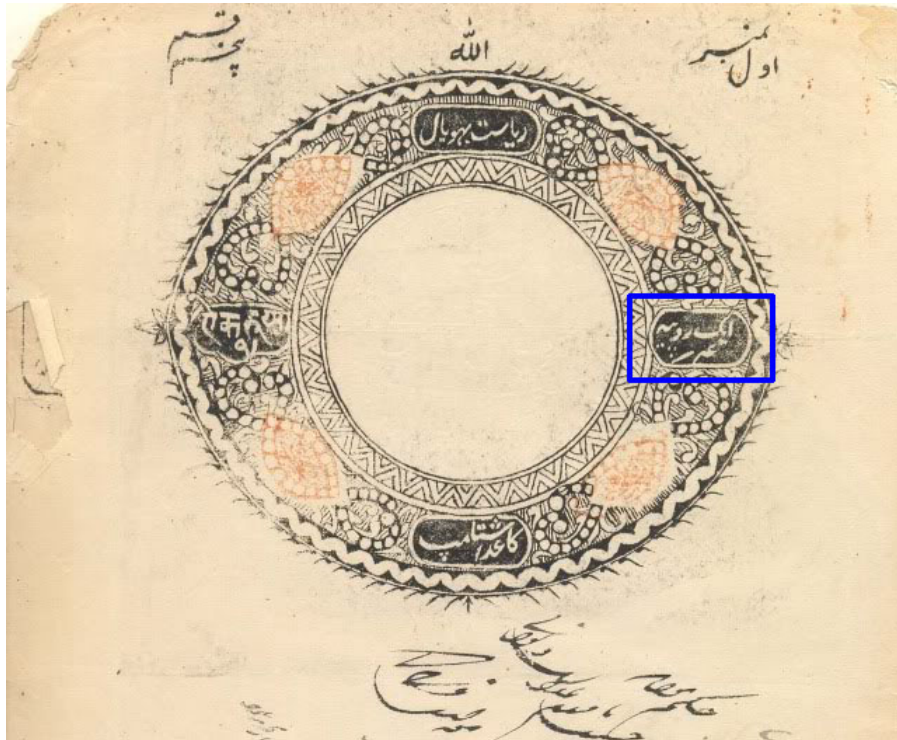


Figure 29: A one rupee stamp paper from Bhopal State. The number one is written using the stylistic alternate عم of عم INDIC SIYAQ NUMBER ONE is shown in the stamp.

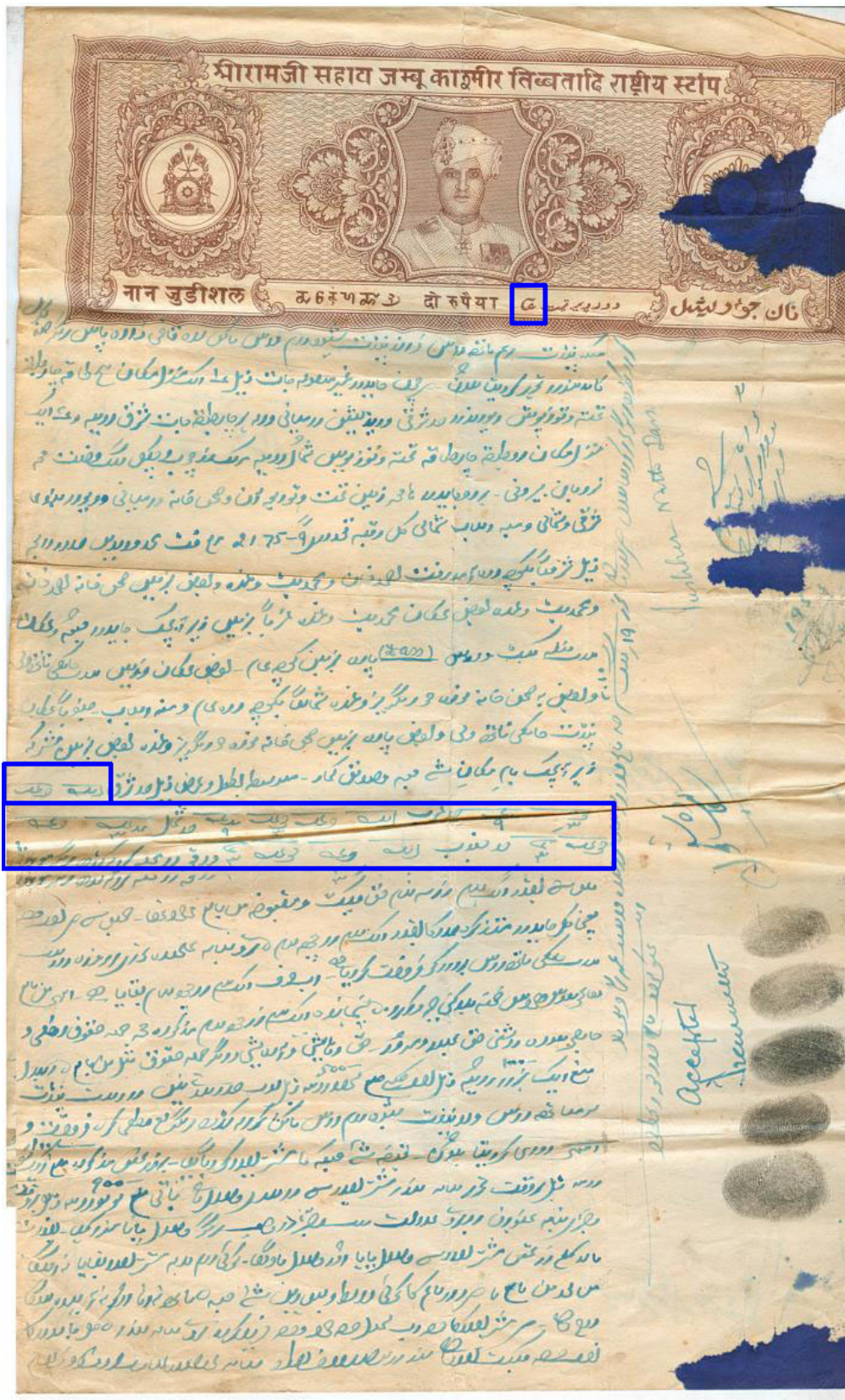


Figure 30: Non-judicial stamp paper from Kashmir State, 1953.

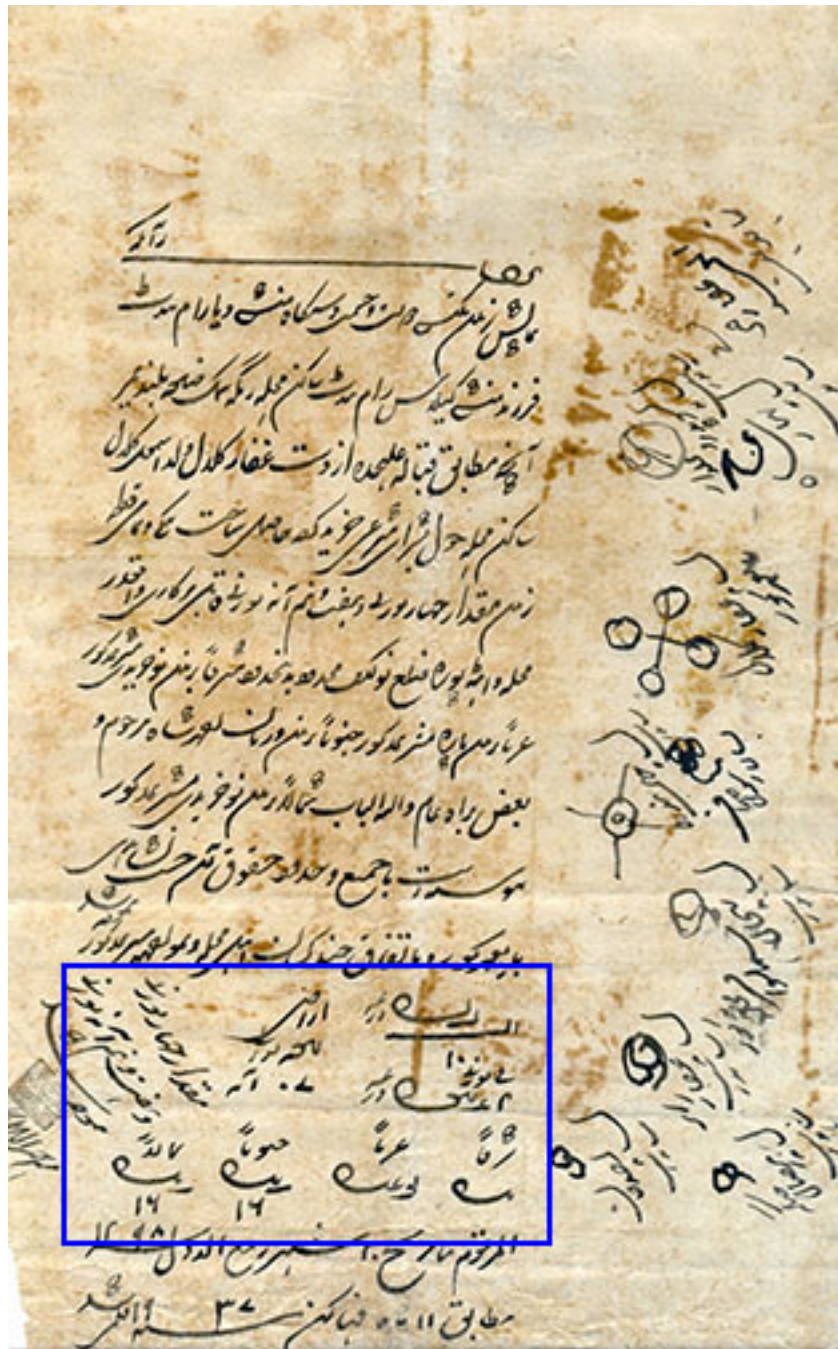


Figure 31: Non-judicial stamp paper from Kashmir State (1880) containing Indic Siyaq numbers.

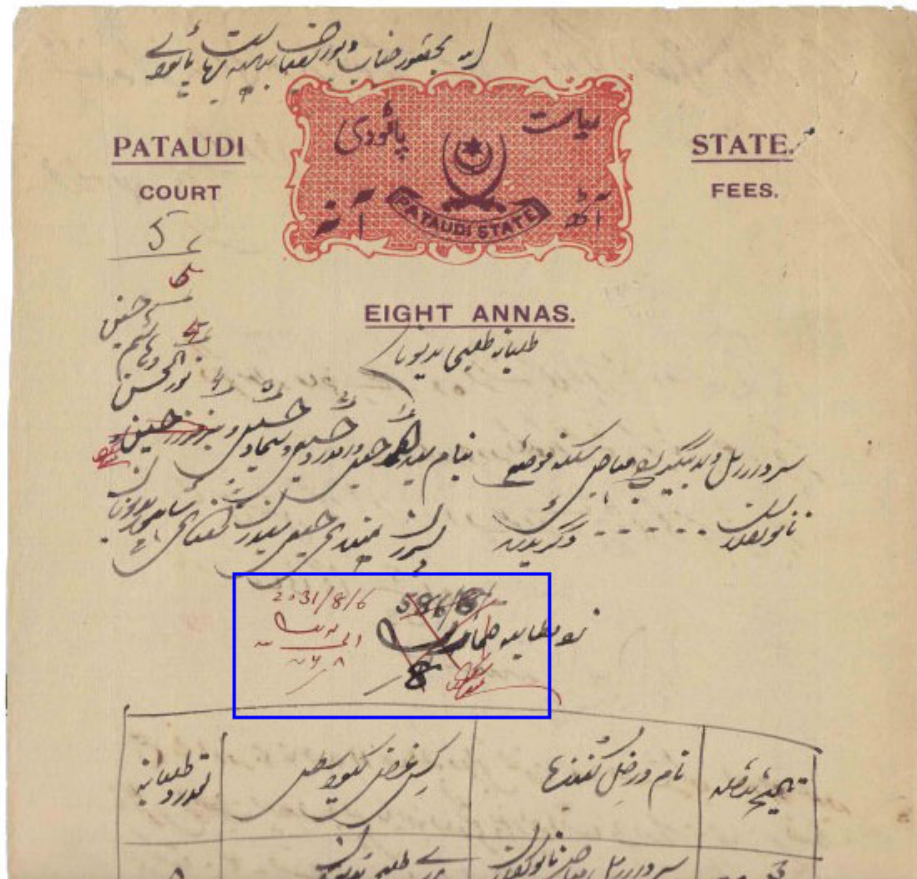


Figure 32: Revenue stamp paper from Pataudi State containing Indic Siyaq numbers.



Figure 33: Stamp paper from Nabha State 19th century showing usage of Indic Siyaq.

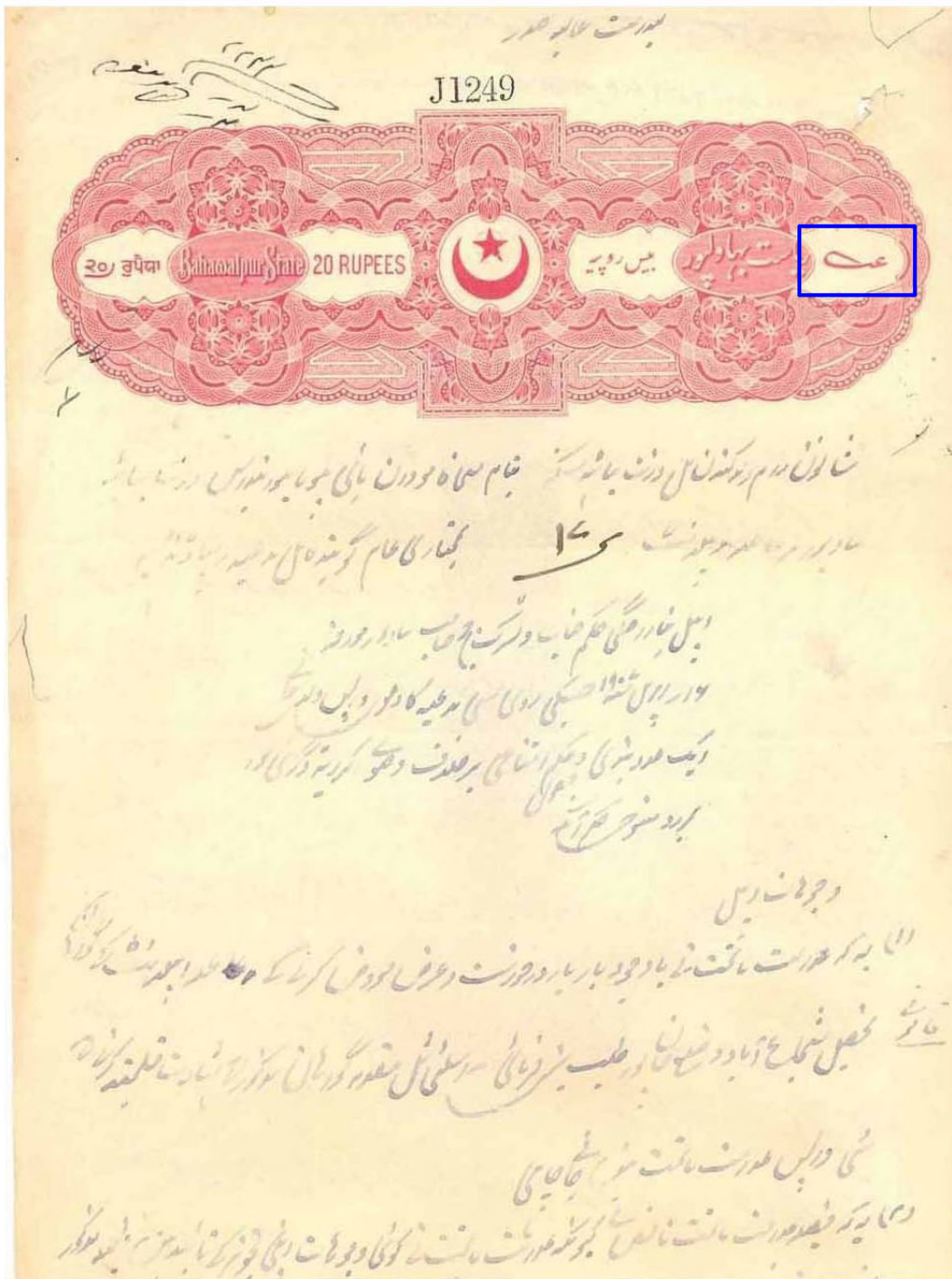


Figure 34: Stamp paper from Bhawalpur State showing usage of Indic Siyaq.