



# বাংলাদেশ স্ট্যান্ডার্ডস এণ্ড টেস্টিং ইনস্টিটিউশন

BANGLADESH STANDARDS AND TESTING INSTITUTION

Member ISO & Codex Alimentarius Commission of FAO/WHO

১১৬-ক, তেজগাঁও শিল্প এলাকা, ঢাকা-১২০৮, বাংলাদেশ

116-A, TEJGAON INDUSTRIAL AREA, DHAKA-1208, BANGLADESH

CABLE :	BESTEYE:
ফোন : অফিস	OFF
৮৮ ১৪ ৬২	88 14 62
৬০ ২৩ ৯৪	60 23 94
৬০ ৮৩ ২৪	60 83 24
৬০ ১৬ ১৯	60 16 19
৬০ ৫৫ ৮৪	60 55 84
৬০ ৪০ ৪৪	60 40 44
৬০ ৬৭ ১০	60 67 10

সূত্র নং -  
Ref. No.

No.BSTI/ET-58/2000 / 390

তারিখ :

Date : 23-8-2000

To  
Mr. Toshiko KIMURA  
Secretariat, ISO/IEC/JTC1/SC 2  
Room 308-3 Kikar Shinko Kaikan  
3-5-8 Shiba-Koen, Minatoku  
TOKYO 105, JAPAN  
Email: Kimura @ itscj ipsj. or.jp

**Subject: Incorporation of Bangla (Bengali) Coded Character in ISO/IEC 10646-1.**

Dear Sir,

We have written to you earlier in several times regarding the incorporating of computer Bangla Coded Character Set in ISO/IEC 10646-1 Universal Multiple Octet Coded Character Set (UCS). However, recently we have revised "BDS 1520: 2000 Bangla Coded Character Set for Information Interchange." Please find enclosed herewith a copy of BDS 1520:2000 (1<sup>st</sup> Revision) and a copy of summery form N 1502 duly filled in by Bangladesh Standards and Testing Institution (BSTI) for necessary action.

2. I would like to mention here that one character named '঳' (KHANDATA) which is widely used in Bengali language, specially required to include in ISO/IEC 10646-1, The '঳' (KHANDATA) is located in code page position 'BA' of our BDS 1520:2000, may be replaced in code page position '09BA' of ISO/ IEC 10646-1 UCS.
3. We hope you would take necessary step for incorporation of BDS 1520: 2000 (i.e, incorporation of only one character '঳' (KHANDATA)) in ISO/ IEC 10646-1.

It would be highly appreciated if you would kindly inform us about the decision of the relevant Sub-committee / Working Group (JTC1/ SC2/WG2).

With best regards

Sincerely Yours,

(Md.Safiqur Rahman)  
Director(Standards)  
Fax: 880-29131581  
E-mail:bsti@ bangla.net

RECEIVED  
2000 9, 4  
IPSU/ITSCU



# বাংলাদেশ স্ট্যান্ডার্ডস এন্ড টেস্টিং ইনস্টিটিউশন

**BANGLADESH STANDARDS AND TESTING INSTITUTION**

Member ISO & Codex Alimentarius Commission of FAO/WHO

১১৬-ক, তেজগাঁও শিল্প এলাকা, ঢাকা-১২০৮, বাংলাদেশ

116-A, TEJGAON INDUSTRIAL AREA, DHAKA-1208, BANGLADESH

CABLE :	BESTEYE:
ফোন : অফিস	OFF
৮৮ ১৪ ৬২	88 14 62
৬০ ২৩ ৯৪	60 23 94
৬০ ৮৩ ২৪	60 83 24
৬০ ১৬ ১৯	60 16 19
৬০ ৫৫ ৮৪	60 55 84
৬০ ৪০ ৪৪	60 40 44
৬০ ৬৭ ১০	60 67 10

সূত্র নং -  
Ref. No.

c.c

তারিখ :  
Date :

1. P.S to the Secretary, Ministry of Industries  
(For kind and valuable attention of the secretary please)
2. P.S to the Secretary, Ministry of Science & Technology  
(For kind and valuable attention of the Secretary please).
3. Mr. Mike Ksar  
Convenar, SC 2/WG 2  
Hewlet-pacard Company  
1501 Page Mill Rd.  
M/S 5U-L  
Palo Alto, CA 94304  
U.S.A  
Email: MIKEKSAR @ H P. Palo Alto -om4.hp.com
4. Joan Aliprand  
Chair, Unicode Technical Committee  
The Unicode Consortium  
P.O. Box 700519  
San Jose, CA 95170-0519  
U.S.A  
Email : unicode inc @ unicode org

**ISO/IEC JTC 1/SC 2/WG 2  
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS  
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646<sup>3</sup>**

Please fill Sections A, B and C below. Section D will be filled by SC 2/WG 2.

**A. Administrative**

1. Title: Bangla

2. Requester's name: Bangladesh Standards and Testing Institution

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

4. Submission date: 23-08-2000

5. Requester's reference (if applicable): \_\_\_\_\_

6. (Choose one of the following):  
 This is a complete proposal: Yes; 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: \_\_\_\_\_

b. The proposal is for addition of character(s) to an existing block: Yes  
 Name of the existing block: 09BA in ISO/IEC 10646 - 1

2. Number of characters in proposal: 1

3. Proposed category (see section II, Character Categories): A

4. Proposed Level of Implementation (see clause 15, ISO/IEC 10646-1):  
 Is a rationale provided for the choice? \_\_\_\_\_  
 If Yes, reference: \_\_\_\_\_

5. Is a repertoire including character names provided? Yes

a. If YES, are the names in accordance with the 'character naming guidelines'  
 in Annex K of ISO/IEC 10646-1? Yes

b. Are the character shapes attached in a reviewable form? \_\_\_\_\_

6. Who will provide the appropriate computerized font (ordered preference: True Type,  
 PostScript or 96x96 bit-mapped format) for publishing the standard?  
 \_\_\_\_\_  
 If available now, identify source(s) for the font (include address, e-mail,  
 ftp-site, etc.) and indicate the tools used:  
 \_\_\_\_\_

7. References:

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

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

8. 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):  
 \_\_\_\_\_

<sup>3</sup> (Form number: N-1116-F 1994-10-14; Revised 1995-01-27, 1995-04-05, 1996-04-25, 1996-08-19)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES explain _____	_____ <b>No</b> _____
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.)? If YES, with whom? _____ If YES, available relevant documents? _____	_____ <b>Yes</b> _____
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference: _____	_____
4. The context of use for the proposed characters (type of use; common or rare) Reference: _____ <b>Widely used in Bangla Language</b> _____	_____
5. Are the proposed characters in current use by the user community? If YES, where? Reference: _____ <b>Bangladesh and other foreign countries</b> _____	_____ <b>Yes</b> _____
6. After giving due considerations to the principles in N 1352 must the proposed characters be entirely in the BMP? If YES, is a rationale provided? _____ If YES, reference: _____	_____
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	_____ <b>Yes</b> _____
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? _____ If YES, reference: _____	_____
9. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? If YES, is a rationale for its inclusion provided? _____ If YES, reference: _____	_____
10. Does the proposal include use of combining characters and/or use of composite sequences (see clause 4.11 and 4.13 in ISO/IEC 10646-1)? If YES, is a rationale for such use provided? _____ If YES, reference: _____ Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? _____ If YES, reference: _____	_____ <b>No</b> _____
11. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary) _____	_____ <b>No</b> _____

D. SC 2/WG 2 Administrative (To be completed by SC 2/WG 2)

1. Relevant SC 2/WG 2 document numbers: _____
2. Status (list of meeting number and corresponding action or disposition): _____
3. Additional contact to user communities, liaison organizations etc: _____
4. Assigned category and assigned priority/time frame: _____

BDS 1520 : 2000

Bangladesh Standard

SPECIFICATION FOR  
BANGLA CODED CHARACTER SET FOR INFORMATION  
INTERCHANGE (FIRST REVISION )



Bangladesh Standard  
SPECIFICATION FOR  
BANGLA CODED CHARACTER SET FOR INFORMATION  
INTERCHANGE (FIRST REVISION )

---

Computer Related Sectional Committee, ET - 15

## CHAIRMAN

DR. M. A. SOBHAN

## REPRESENTATING

Bangladesh Computer Council, Dhaka.

## MEMBERS

DR. AMINUL HAQUE

Engineers Institution, Bangladesh .

MR. MD. ABDUS SATTAR

Bangladesh University of Engineering &amp; Technology , Dhaka .

MR. MD. JULFIQUAR HAFIZ

Dhaka University , Dhaka .

MR. MIR MD. SAKHAWAT HOSSAIN

Bangladesh Computer Council, Dhaka .

MR. A. K. K. ZAKIUL HAQUE

Bangla Academy, Dhaka.

MR. MD. ATIQUUL AHSAN

Bangladesh Computer Samity, Dhaka.

MR. MOSTAFA JABBAR

Annanda Computers, Dhaka .

MR. HABIBULLAH N. KARIM

Technoheaven Co. Ltd, Dhaka .

MR. S. M. KAMAL

Beximco Computers Ltd., Dhaka.

MR. FERDOUS AHMED QURESHY

Sapta Shindo Ltd, Dhaka.

MR. R. R. A. ABDULLAH

The *safe* Works, Dhaka .

## ASSOCIATE MEMBERS

DR. A. K. AZAD

Bangladesh Institute of Technology,  
Khulna.

MR. S. M. A. KHALED SIDDIQUI

Govt. Commercial Institute, Mymensingh.

## GUEST MEMBER

MR. MD. LIAQUAT ALI

Bangladesh Standards and Testing  
Institution, Dhaka.

Director ( Physical )

## EX - OFFICIO MEMBER

MR. MD. SAFIQR RAHMAN

Bangladesh Standards and Testing  
Institution, Dhaka .

Director ( Standards )

STAFF

MR. MD. FERUZ MIAH  
Deputy Director (Elec.)

Bangladesh Standards and Testing  
Institution, Dhaka .

MR. MD. REZAUL KARIM  
Assistant Director (Elec.) &  
Secretary to the Committee

do

MR. MD. SAJJADUL BARI  
Assistant Director (Elec.)

do

MRS. RAHIMA TALUKDER  
Examiner (Elec.)

do

Bangladesh Standard  
BANGLA CODED CHARACTER SET FOR  
INFORMATION INTERCHANGE  
(1ST REVISION)

**0. FOREWORD**

0.1 This Bangladesh Standard was adopted by the Bangladesh Standards and Testing Institution ~~25-07-2000~~ after the standard revised by the Computer Related Sectional Committee had been approved by the Electrotechnical Divisional Committee.

0.2 This standard contains a set of Bangla Characters (graphic characters such as letters, digits & symbols) with their coded representation. Most of these characters are mandatory and unchangeable.

0.3 This standard specifies Bangla Character Codes intended for the interchange of information among data processing systems including the recording of data in the form of codes on media.

0.4 This character set is applicable to all letters on Bangla Characters.

0.5 This standard is based on latest revision of International Standard ISO/IEC 646-1991 "Information technology-ISO 7-bit coded character set for information interchange" issued by International Organization for Standardization (ISO) and thus acknowledged with thanks.

**1. SCOPE**

1.1 This standard specifies Bangla versions of character code which are the extensions of the ISO/IEC 646 table, specification of the codes and with their coded representation.

1.2 This standard specifies Bangla Character Codes intended for the interchange of information among data processing systems including the recording of data in the form of codes on media.

1.3 This character set is applicable to alphabets of the Bangla script.



## 2. CONFORMANCE

### 2.1 Conformance

2.1.1 Conformance of information interchange - A coded-character-data-element (CC-data-element) within coded information for interchange is in conformance with this Standard if all the coded representations of characters within that CC-data-element conform to this Standard.

2.1.2 Conformance of device - A device is in conformance with this Standard if it conforms to the requirements of 2.1.2.1 and either or both of 2.1.2.2 and 2.1.2.3 below. A claim of conformance shall identify the version adopted.

2.1.2.1 Device description - A device that conforms to this Standard shall be the subject of a description that identifies the means by which the user may supply characters to the device, or may recognize them when they are made available to him, as specified respectively in 2.1.2.2 and 2.1.2.3.

2.1.2.2 Originating devices - An originating device shall allow its user to supply any sequence of characters from the version adopted, and shall be capable of transmitting their coded representations within a CC - data-elements.

2.1.2.3 Receiving devices - A receiving device shall be capable of receiving and interpreting any coded representations of characters that are within a CC-data-element, and that conform to 2.1.1 and shall made the corresponding characters available to its user in such a way that the user can identify them from among those of the version adopted, and can distinguish them from each other.

## 3. IMPLEMENTATION

This character set should be regarded as a basic alphabet in an abstract sense. Its practical use requires definitions of its implementation in various media. For example, this could include punched tapes, punched cards, magnetic and optical interchangeable media and transmission channels, thus permitting interchange of data to take place either indirectly by means of an intermediate recording on a physical medium, or by local electrical connection of various units (such as input and output devices and computers) or by means of data transmission equipment.

The implementation of this coded character set in physical media and for transmission, taking into account the need for error checking, is not covered by this standard.

## 4. TERMINOLOGY

For the purpose of this standard the following definitions apply.

**4.1 Active position-** The character position which is to image the graphic symbol representing the next graphic character or relative to which the next control function is to be executed.

**NOTE 1-** In general the active position is indicated in a display by a cursor.

**4.2 Bit combination-** An ordered set of bits used for the representation of characters.

**4.3 Character-** A member of a set of elements used for the organization, control or representation of data.

**4.4 Character position-** The portion of a display that is imaging or is capable of imaging a graphic symbol.

**4.5 Coded character set; code-** A set of unambiguous rules that establishes a character set and the one-to-one relationship between the characters of the set and their bit combinations.

**4.6 Coded-character-data-element ( CC-data-element)-** An element of interchanged information that is specified to consist of a sequence of coded representations of characters, in accordance with one or more identified standards for coded character sets.

**NOTE 2 -** In a communication environment according to the Reference Model for Open Systems Interconnection (ISO 7498), a CC-data-element will form all or part of the information that corresponds to the Presentation-Protocol-Data-Unit (PPDU) defined in that International Standard.

**NOTE 3 -**When information interchange is accomplished by means of interchangeable media, a CC-data-element will form all or part of the information that corresponds to the user data, and not that recorded during formatting and initialization.

**4.7 Code extension-** The techniques for the encoding of characters that are not included in the character set of a given code.

**4.8 Code table-** A table showing the character allocated to each bit combination in a code.

**4.9 Control character-** A control function the coded representation of which consists of a single bit combination.

**4.10 Control function-** An action that affects the recording, processing, transmission, or interpretation of data, and that has a coded representation consisting of one or more bit combinations.

**4.11 Device-** A component of information processing equipment which can transmit, and or receive, coded information within CC-data-elements.

**NOTE 4 -** It may be an input / output device in the conventional sense, or a process such as an application program or gateway function.

**4.12 Escape sequence-** A string of bit combinations that is used for control purposes in code extension procedures. The first of these bit combinations represents the control function ESCAPE.

**4.13 Final Byte-** The bit combination that terminates an escape sequence or a control sequence.

**4.14 Graphic character-** A character, other than a control function, that has a visual representation normally handwritten, printed or displayed, and that has a coded representation consisting of one or more bit combinations.

**4.15 Graphic symbol-** A visual representation of a graphic character or of a control function.

**4.16 Repertoire-** A specified set of characters that are represented by means of one or more bit combinations of a coded character set.

**4.17 User-** A person or other entity that invokes the services provided by a device.

**NOTE 5 -** This entity may be a process such as an application program if the "device" is a code convertor or a gateway function, for example.

**NOTE 6 -** The characters as supplied by user or made available to him, may be in the form of codes local to the device, or of non-conventional visible representation.

**4.18 Bangla Characters-** Bangla letters, digits and special symbols which can be grouped as follows:

## 4.18.1 Bangla alphabates

## 4.18.1.1 Consonents

ক খ গ ঘ ঙ চ ছ জ ঝ ঞ ট ঠ ড ঢ ণ ত থ দ ধ ন  
প ফ ব ভ ম য র ল শ ষ স হ ড় ঢ় য় ং ঃ ঔ

## 4.18.1.2 Vowels

অ আ ই ঈ উ ঊ ঋ ঌ ঐ ও ঔ

## 4.18.1.3 Bangla Digits

০ ১ ২ ৩ ৪ ৫ ৬ ৭ ৮ ৯

## 4.18.1.4 Generic addition

ঋ ঌ ঐ ও

## 4.18.1.5 Bangla specific addition

ৰ র ঙ (Taka) \ (Taka Mark) ✓ ↗ ↘ । ॥  
০ ৩

## 5. STANDARD CODE TABLE

The standard 8-bit code table (Table -1) is made up of 16 columns numbered 0 to 15 and 16 rows numbered 0 to 15 containing 256 code positions. Columns 8 to 15 Contains 86 graphic characters.

## 6. EXPLANATORY NOTES

6.1 Numbering of the position in Table 1 - Within any one character the bits are identified by  $b_8$   $b_7$  ---  $b_2$   $b_1$  where  $b_8$  is the highest order, or most significant bit, and  $b_1$  is the lowest order or least significant bit.

If desired, these may be given numerical significance in the binary system thus :

Bit identification : b<sub>8</sub> b<sub>7</sub> b<sub>6</sub> b<sub>5</sub> b<sub>4</sub> b<sub>3</sub> b<sub>2</sub> b<sub>1</sub>

Significance : 128 64 32 16 8 4 2 1

In the table the columns and rows are identified either by its bit combination or by its column and row numbers. For instance the position containing the digit (One) may be identified -

- by its bit combination in order of decreasing significance i.e, 1110 0111
- by its column and row numbers, i.e, E/7

The column number is derived from its bits b<sub>8</sub> b<sub>7</sub> b<sub>6</sub> & b<sub>5</sub> giving them weights of 8, 4, 2, & 1 respectively. The row number is from bits b<sub>4</sub> b<sub>3</sub> b<sub>2</sub> & b<sub>1</sub> giving them weights 8, 4, 2 & 1 respectively

6.2 Code table-A 8-bit table consists of 256 positions arranged in 16 columns and 16 row.

The columns are numbered 0 to 15 and the rows 0 to 15.

The code table positions are identified by notations of the form x/y, where x is the column number and y is the row number.

The positions of the code table are in one-to-one correspondence with the bit combinations of the code. The notation of a code table position, of the form x/y, is the same as that of the corresponding bit combination.

6.3 Names- This standard assigns at least one name to denote each of the graphic characters displayed in Table 1.

The names chosen to denote graphic characters are intended to reflect their customary meanings. However, this standard does not define and does not restrict the meanings of graphic characters. In addition, it does not specify a particular style or font design for the graphic characters.

6.4. Uniqueness of character Allocation - A character allocated to a position in Table 1, may not be placed elsewhere in the table. The graphic characters are specified in table 2.

Table 1 - Basic Code Table  
Code position for Bangla character

				b8	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
				b7	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	
				b6	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	
				b5	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
					0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
b4	b3	b2	b1		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	৩	৪	৫	৬	৭	৮	৯	
0	0	0	1	1	1	1	1	1	1	1	1	1	1	ং	ড	ঢ	ণ	ত	থ	দ	
0	0	1	0	2	2	2	2	2	2	2	2	2	2	ং	ঢ	ণ	ত	থ	দ	ন	
0	0	1	1	3	3	3	3	3	3	3	3	3	3	ং	ও	শ	ষ	জ	ঝ	ঞ	
0	1	0	0	4	4	4	4	4	4	4	4	4	4	উ	ত	থ	দ	ন	প	ফ	
0	1	0	1	5	5	5	5	5	5	5	5	5	5	অ	ক	খ	গ	ঘ	ঙ	চ	
0	1	1	0	6	6	6	6	6	6	6	6	6	6	আ	খ	দ	শ	ষ	জ	ঝ	
0	1	1	1	7	7	7	7	7	7	7	7	7	7	ই	গ	ঘ	ষ	জ	ঝ	ঞ	
1	0	0	0	8	8	8	8	8	8	8	8	8	8	ই	ঘ	ন	স	হ	ল	ল	
1	0	0	1	9	9	9	9	9	9	9	9	9	9	উ	ঙ	হ	ল	ল	ল	ল	
1	0	1	0	A	10	10	10	10	10	10	10	10	10	উ	চ	প	ফ	ব	ব	ব	
1	0	1	1	B	11	11	11	11	11	11	11	11	11	ঋ	ৠ	ৡ	ৢ	ৣ	৤	৥	
1	1	0	0	C	12	12	12	12	12	12	12	12	12	০	১	২	৩	৪	৫	৬	
1	1	0	1	D	13	13	13	13	13	13	13	13	13	০	১	২	৩	৪	৫	৬	
1	1	1	0	E	14	14	14	14	14	14	14	14	14	০	১	২	৩	৪	৫	৬	
1	1	1	1	F	15	15	15	15	15	15	15	15	15	০	১	২	৩	৪	৫	৬	

Table 2- Graphic Character Allocations  
Decimal and hexadecimal coded representation for Bangla characters.

Graphic Symbol	Name	Code Representation	Hexa Code
,	Bangla sign Chandrabindu	8/1	81
ূ	Bangla sign Anusvara	8/2	82
ূ̇	Bangla sign Visarga	8/3	83
অ	Bangla letter A	8/5	85
আ	Bangla letter AA	8/6	86
ই	Bangla letter I	8/7	87
ঈ	Bangla letter II	8/8	88
উ	Bangla letter U	8/9	89
ঊ	Bangla letter UU	8/10	8A
ঋ	Bangla letter Vocalic R	8/11	8B
ৄ	Bangla letter E	8/15	8F
ঐ	Bangla letter AI	9/0	90
ঔ	Bangla letter O	9/3	93
৊	Bangla letter AU	9/4	94
ো	Bangla letter KA	9/5	95
ৌ	Bangla letter KHA	9/6	96
্	Bangla letter GA	9/7	97
ৎ	Bangla letter GHA	9/8	98
৏	Bangla letter UNGA	9/9	99
৐	Bangla letter CA	9/10	9A
৑	Bangla letter CHA	9/11	9B
৒	Bangla letter JA	9/12	9C
৓	Bangla letter JHA	9/13	9D
৔	Bangla letter NYA	9/14	9E
৕	Bangla letter TTA	9/15	9F
৖	Bangla letter TTHA	10/0	A0
ৗ	Bangla letter DDA	10/1	A1
৘	Bangla letter DDHA	10/2	A2
৙	Bangla letter NNA	10/3	A3
৚	Bangla letter TA	10/4	A4
৛	Bangla letter THA	10/5	A5
ড়	Bangla letter DA	10/6	A6
ঢ়	Bangla letter DHA	10/7	A7
৞	Bangla letter NA	10/8	A8
য়	Bangla letter PA	10/10	AA
ৠ	Bangla letter PHA	10/11	AB

১	Bangla letter BA	10/12	AC
২	Bangla letter BHA	10/13	AD
৩	Bangla letter MA	10/14	AE
৪	Bangla letter YA	10/15	AF
৫	Bangla letter RA	11/0	B0
৬	Bangla letter LA	11/2	B2
৭	Bangla letter SHA	11/6	B6
৮	Bangla letter SSA	11/7	B7
৯	Bangla letter SA	11/8	B8
১০	Bangla letter HA	11/9	B9
১১	Bangla letter KHANDATA	11/10	BA
১২	Bangla sign NUKTA	11/12	BC
১৩	Bangla Vowel Sign AA	11/14	BE
১৪	Bangla Vowel Sign I	11/15	BF
১৫	Bangla Vowel Sign II	12/0	C0
১৬	Bangla Vowel Sign U	12/1	C1
১৭	Bangla Vowel Sign UU	12/2	C2
১৮	Bangla Vowel Sign Vocalic R	12/3	C3
১৯	Bangla Vowel Sign Vocalic RR	12/4	C4
২০	Bangla Vowel Sign E	12/7	C7
২১	Bangla Vowel Sign AI	12/8	C8
২২	Bangla Vowel Sign O	12/11	CB
২৩	Bangla Vowel Sign AU	12/12	CC
২৪	Bangla Sign Virama	12/13	CD
২৫	Bangla AU Length Mark	13/7	D7
২৬	Bangla letter RRA	13/12	DC
২৭	Bangla letter RHA	13/13	DD
২৮	Bangla letter YYA	13/15	DF
২৯	Bangla letter Vocalic RR	14/0	E0
৩০	Bangla letter Vocalic LL	14/1	E1
৩১	Bangla Vowel Sign Vocalic L	14/2	E2
৩২	Bangla Vowel Sign Vocalic LL	14/3	E3
৩৩	Bangla Digit Zero	14/6	E6
৩৪	Bangla Digit One	14/7	E7
৩৫	Bangla Digit Two	14/8	E8
৩৬	Bangla Digit Three	14/9	E9
৩৭	Bangla Digit Four	14/10	EA
৩৮	Bangla Digit Five	14/11	EB
৩৯	Bangla Digit Six	14/12	EC
৪০	Bangla Digit Seven	14/13	ED
৪১	Bangla Digit Eight	14/14	EE
৪২	Bangla Digit Nine	14/15	EF
৪৩	Bangla letter RA with Middle Diagonal	15/0	F0
৪৪	Bangla letter RA with Lower Diagonal	15/1	F1
৪৫	Bangla Taka Mark	15/2	F2



Bangla Taka Sign	15/3	F3
Bangla Currency Numerator One	15/4	F4
Bangla Currency Numerator Two	15/5	F5
Bangla Currency Numerator Three	15/6	F6
Bangla Currency Numerator Four	15/7	F7
Bangla Currency Numerator One less than the Denominator	15/8	F8
Bangla Currency Denominator Sixteen	15/9	F9
Bangla ISSHAR	15/10	FA

১০  
১৫/৩  
১৫/৪  
১৫/৫  
১৫/৬  
১৫/৭  
১৫/৮  
১৫/৯  
১৫/১০