ASSAM POLICE EXAM SERIES

REASONING

CODING - DECODING

PDF 1 : Concepts, Tricks & Practice Questions

AB / UB / SI Level | Bilingual: English + Assamese Roman

Prepared for Assam Police AB / UB / SI Examination
Theme: Light Blue & Pink | Professional Study Material

CODING - DECODING

CHAPTER OVERVIEW

Coding-Decoding questions test your ability to identify a **pattern or rule** used to encode words, numbers, or symbols — and then decode a given coded message using the same rule. This topic is extremely important for **Assam Police AB, UB, and SI exams**. Usually 3–6 questions appear from this chapter.

(Assamese Roman: Coding-Decoding-ot pattern bujhi logically answer koribo lagibo. Exam-ot 3-6 question ahi thake.)

■ TYPES OF CODING-DECODING

Type	Description	Frequency
Letter Coding	Letters shifted by fixed number	★★★★★
Number Coding	Alphabets replaced by numbers	★★★★■
Symbol Coding	Letters replaced by symbols	★★★■■
Word/Sentence	Entire words coded differently	★★★★■
Mixed Coding	Combination of above types	★★★★★
Reverse Coding	Alphabet position reversed (Z=1)	★★★★■

■ ALPHABET POSITION CHART (Most Important!)

Memorize this chart. It is the foundation of almost all coding questions.

Assamese Roman: Ei chart-khon mone rakhibi — sab coding question-ot kame ahi thake.

Alphabet	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Forward (A=1)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Reverse (Z=1)	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

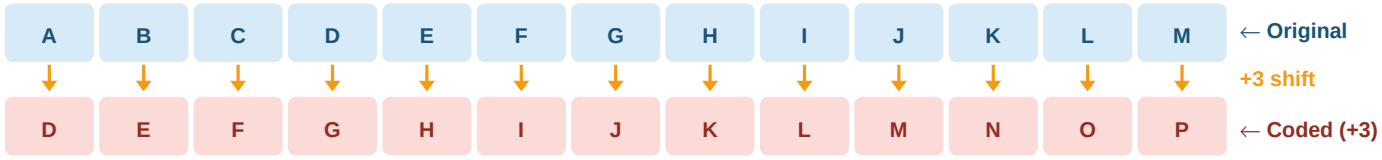
■ Quick Trick: EJOTY Rule	
E = 5	**J = 10**
O = 15	**T = 20**
Y = 25	**(Every 5th letter)**

TYPE 1 — LETTER CODING (Alphabet Shift)

Concept: Each letter in the original word is shifted forward or backward by a fixed number of positions in the alphabet.

Assamese: Protikhon letter-k alphabet-ot fixed number-re agolai (forward) ba pisoni (backward) niya hoy.

■ Visual: +3 Letter Shift (CAT → FDW)



■ Worked Example: CAT → ? (Each letter +3)

Step	Letter	Position	Shift +3	Coded Letter
C	C	3	3 + 3 = 6	F
A	A	1	1 + 3 = 4	D
T	T	20	20 + 3 = 23	W

Answer: CAT → FDW

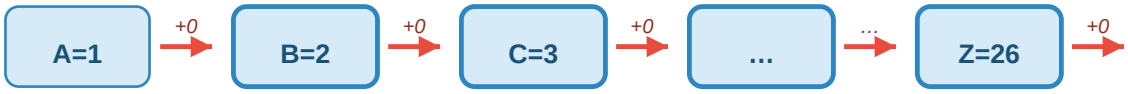
■ SHORT TRICKS — Letter Coding	
Trick 1	If coded letter comes AFTER original → Forward shift (+)
Trick 2	If coded letter comes BEFORE original → Backward shift (–)
Trick 3	Find shift from ONE pair → apply to all others
Trick 4	For reverse: Original position + Coded position = 27 always
Trick 5	EJOTY rule: E=5, J=10, O=15, T=20, Y=25 → quick position

TYPE 2 — NUMBER CODING

Concept: Each letter is replaced by its position number in the alphabet (A=1, B=2 … Z=26) or the reverse (A=26, Z=1), sometimes with operations like adding/subtracting a constant.

Assamese: Protikhon letter-r position number hisabe code kora hoy.

Standard Number Coding: A=1, B=2, ..., Z=26



■ Number Coding Reference Table

Letter	Forward (A=1)	Reverse (Z=1=26-pos+1)	Coded (A=1)+2
A	1	26	3
B	2	25	4

Letter	Forward (A=1)	Reverse (Z=1=26-pos+1)	Coded (A=1)+2
C	3	24	5
M	13	14	15
Z	26	1	28 → wrap = 2

■ **Example:** If CODE = 3-15-4-5, what is RING? (A=1,B=2…) → R=18, I=9, N=14, G=7 → **RING = 18-9-14-7**

TYPE 3 — REVERSE / MIRROR CODING

Concept: The alphabet is reversed: A↔Z, B↔Y, C↔X … Key property: **Original + Coded = 27** always.

Assamese: Alphabetkhon ulta hoi jai — A-r jagat Z, Z-r jagat A.

Original	A	B	C	D	E	M	N	Y	Z
Coded	Z	Y	X	W	V	N	M	B	A
Sum	27	27	27	27	27	27	27	27	27

■ **Example:** COLD is coded as XLOW. Decode SLOW. S(19)→H(8)? No — mirror: S↔H, L↔O, O↔L, W↔D = **HOLD**

TYPE 4 — WORD / SENTENCE CODING

Concept: Complete words are assigned codes. You identify which code corresponds to which word by comparing two coded sentences that share common words.

Assamese: Pura word-khonor code diya thake; do ta sentence compare kori common word-r code bujhibo lagibo.

Sentence 1	ra ja ta	→	"sky is blue"
Sentence 2	ra ma ta	→	"sky is red"
Common	ra … ta	→	sky, is (common words)
Difference	ja vs ma	→	blue vs red
Conclusion	**ja = blue**	**ma = red**	**ra or ta = sky/is**

TYPE 5 — SYMBOL CODING

Concept: Letters are replaced by symbols (!, @, #, $, *, etc.). The same logic applies — find the pattern from given examples.

Assamese: Letter-r jagat symbol use kora hoy. Pattern-khon same — example dekhilu bujhibo.

Letter	A	B	C	D	E	F
Symbol	@	#	$	%	!	&

■ **Example:** Using above table: CAB = **$@#**, FACE = **&@$!**

TYPE 6 — MIXED / COMBINED CODING

Concept: Combines letter shift, number, and reverse. Example: Odd-position letters shift +2, even-position letters shift –1.

Assamese: Ei type-ot multiple rule ekloge use hoy. Position (odd/even) hisabe alag alag shift diya thake.

Position	Type	Rule	Example (MAKE)
Odd (1,3,5…)	Shift +2	Letter → +2	M(13+2)=O, K(11+2)=M
Even (2,4,6…)	Shift –1	Letter → –1	A(1–1)=Z, E(5–1)=D
Result	—	—	MAKE → O Z M D

➡■ PRACTICE QUESTIONS — Easy to Hard (AB/UB/SI Level)

Questions below are graded: ■ Easy → ■ Medium → ■ Hard (SI Level)

■ Q1 [Easy]

If BALL is coded as CBMM, what is the code for CALL?

→ **Each letter is shifted +1. C→D, A→B, L→M, L→M → DBMM**

■ Q2 [Easy]

If A=1, B=2, C=3… what is the code for DOG?

→ **D=4, O=15, G=7 → 4-15-7**

■ Q3 [Easy]

In a code, CAT is written as FDW. What is the code for DOG?

→ **Each letter +3: D→G, O→R, G→J → GRJ**

■ Q4 [Easy]

If "ra ja" means "good morning" and "ja ka" means "morning walk", what does "ra" mean?

→ **"ja" is common = morning. So "ra" = good**

■ Q5 [Easy]

In mirror coding, what is the code for ACE?

→ **A→Z, C→X, E→V → ZXV**

■ Q6 [Medium]

If FISH is coded as EHRG, find the code for BIRD.

→ **F→E(–1), I→H(–1), S→R(–1), H→G(–1). B→A, I→H, R→Q, D→C → AHQC**

■ Q7 [Medium]

In a certain code, GARDEN is written as HBSEFM. How is FLOWER coded?

→ **Each letter +1: F→G, L→M, O→P, W→X, E→F, R→S → GMPXFS**

■ Q8 [Medium]

If ROAD = 18-15-1-4, what is MOON?

→ **M=13, O=15, O=15, N=14 → 13-15-15-14**

■ Q9 [Medium]

If "ka la ma" = "play chess game", "la na pa" = "chess is fun", "ka pa ra" = "play is important", what is the code for "game"?

→ **"la" = chess (common in S1,S2). "ka"=play (S1,S3). "pa"=is (S2,S3). "ma"=game → ma**

■ Q10 [Medium]

In a code, odd-position letters are shifted +2, even-position shifted –2. What is the code for LUCK?

→ **L(12+2)=N, U(21–2)=S, C(3+2)=E, K(11–2)=I → NSEI**

■ Q11 [Medium]

If each letter is coded by the letter 2 positions to its right, and numbers replace vowels (A=1,E=2,I=3,O=4,U=5), code the word MANGO.

→ **M→O, A(vowel)=1, N→P, G→I, O(vowel)=4 → O1P I4... → O1PI4**

■ Q12 [Medium]

If COMPUTER is coded as RFUVQNPC, what is the pattern?

→ **Reverse the word: RETUPMOC, then shift each +1: S,F,V,V,Q,N,P,D... Actually: Each letter of reversed COMPUTER is +1: R→S... Let us re-check: C↔R? C(3)→R(18) differ 15. O↔F differ 9... It is reverse alphabet: C→X, O→L... no. Reverse word RETUPMOC then each –1: Q,D,T,T,O,L,N,B... Correct pattern: Reverse + each letter shifted –1. → Approach: COMPUTER reversed = RETUPMOC, each –1: Q,D,S,T,O,L,N,B = QDSTONB... Note: In exam, always verify with 2–3 letters first.**

■ Q13 [Hard – SI]

In a code language, if 13 = AD, 24 = BE, 35 = CF, what is 46?

→ **Pattern: tens digit position = first letter, units digit position = second letter. 4→D, 6→F → DF**

■ Q14 [Hard – SI]

If REASONING is coded as 18-5-1-19-15-14-9-14-7, and the code for ASSAM is 1-19-19-1-13, what is the code for POLICE?

→ **A=1…Z=26: P=16, O=15, L=12, I=9, C=3, E=5 → 16-15-12-9-3-5**

■ Q15 [Hard – SI]

In a certain coding: A=2, B=4, C=6… (even multiples). EXAM is coded as: E=10, X=48, A=2, M=26. Decode: 20-16-12-8

→ **20=J(10th letter×2), 16=H(8th×2), 12=F(6th×2), 8=D(4th×2) → JHFD**

■ Q16 [Hard – SI]

Odd-positioned letters → next letter; Even-positioned → previous letter; then the entire coded word is reversed. Code for BRAVE?

→ **B(1,odd)→C; R(2,even)→Q; A(3,odd)→B; V(4,even)→U; E(5,odd)→F → CQBUF → reversed → FUBQC**

■ Q17 [Hard – SI]

If "si ri ti" = "Assam is beautiful", "ri ni pi" = "is it true", "si ki li" = "Assam has mountains", what does "ti" mean?

→ **"si"=Assam (S1,S3), "ri"=is (S1,S2). "ti" appears only in S1 → ti = beautiful**

■ Q18 [Hard – SI]

In a code, letters are replaced by their positions, but the digits of each position number are reversed. A=1(→1), B=2(→2)…J=10(→01)…Z=26(→62). What is ZONE coded as?

→ **Z=26→62, O=15→51, N=14→41, E=5→5 → 62-51-41-5**

■ Q19 [Hard – SI]

If first and second letters interchange, third and fourth interchange, and so on (pairs swap), code REASONING.

→ **RE→ER, AS→SA, ON→NO, IN→NI, G stays. REASONING(9 letters): RE AS ON IN G → ER SA NO NI G → ERSANONIG**

■ Q20 [Hard – SI]

A word is coded by: (1) reversing it, (2) shifting each letter by its position number. Decode HBNC.

→ **Step 2 undo: H is position 1 in coded word → H–1=G; B pos2 → B–2=Z; N pos3 → N–3=K; C pos4 → C–4=Y → GZKY → reverse → YKZG... Note: Such complex questions are rare but possible in SI paper.**

■ QUICK REVISION CARD — Coding Decoding

Type	Key Rule	Trick
Letter Shift	Find shift from 1 pair	Apply same to all
Number Coding	A=1 or A=26	Use EJOTY for fast pos
Reverse/Mirror	A↔Z, B↔Y…	Sum = 27 always
Word Coding	Compare sentences	Common word = common code
Symbol Coding	Map letters to symbols	Make your own table
Mixed	Odd/Even position rules	Check first 2 letters first

Assamese Roman: Exam-ot question dekhia prothome type identify koribo, tarpor trick apply koribo. Pattern bujha-i sabator key! Har din 5 ta question practice koribo.

Best of Luck for your Assam Police Exam! ■

PDF 2 mango — 100 MCQ dibo (Full Practice Set)