Problem #1

The Kharosthi script is written right to left.

/	ρ	ᛘ	✕	כ	3	﹐	ᴇ
1	2	3	4	10	20	100	1000

Numbers in Kharosthi use an additive system with multiplication. For example, the number 2957 is written as 2 1000 4 4 1 100 20 20 10 4 3: ᛘ✕כ33﹐/✕✕ᴇρ.

Answer

(a)

ρ	ρ33	/✕✕3﹐✕	/	/✕	ρכ﹐	כ3﹐✕ᴇ	✕כ	ρ333﹐✕✕ᴇ✕	/
2	42	429	1	5	132	1430	14	4862	1

(5 pt) [1 point is deducted for each incorrect answer.]

(b)

1. $3 \times 370 = 1110$
2. $48 + 1954 = 2002$
3. $235 + 169 = 404$

(6 pt) [2 points for each question. 1 point is deducted for each incorrect number.]

(c)

6=ρ✕ ， 97=ᛘ✕כ3333 ， 203=ᛘ﹐ρ ， 580=3333﹐/✕ ， 3711=/כ﹐ᛘ✕ᴇᛘ

(9 pt) [1 point for 6 and 2 point for each other question. No partial credit.]

Reference

Glass, Andrew. (2000) *A Preliminary Study of Kharoṣṭhī Manuscript Paleography.* University of Washington.

Problem #2

The word order is SVO.

person	singular	dual	trial	plural
I *(exclusive)*	**iau**	**amir**	**amital**	**avet**
I *(inclusive)*		**dor**	**datal**	**dat**
II	**u**	**amur**	**amutal**	**avat**
III	**i**	**dir**	**dital**	**diat**

The final **t** of plural pronouns are deleted when preceding plosives (**b**, **p**, and **t** occurred in this problem).

The tense markers (preceding vowels) are as described below:

person	future *(singular)*	future *(non-singular)*	past
I	**ina**		
II	**una**	**a**	**tar**
III	**na**		

Non-singular possessive determiner:

For pronouns start with a consonant (I *(inclusive)* and III), add a prefix **ka-**.

For pronouns start with a vowel (I *(exclusive)* and II), add a prefix **k-** and duplicate the CV in second syllable.

Shaded cases are absent in this problem.

Answer

(a)

16. *We (2) will speak our (incl.pl) language.* (3pt)
17. *Our (excl.pl) betelnut and their (2) money.* (3 pt)
18. *You (pl) will buy the sacred pig.* (2 pt)
19. *You (3) went from Kokopo.* (2 pt)

(b)

20. **Ave tar nongon.** (2 pt)
21. **Dir tar kul ra pia ngalangala.** (3 pt)
22. **Kamimital banam ma kavava pem.** (3 pt)
23. **I na pot Rabaul.** (2 pt)

Reference

Franklin, Karl J.; Kerr, Harland B. (1974) *Language Data Asian-Pacific Series, Number 7: Tolai Language Course.* Papua New Guinea: Summer Institute of Linguistics.

Problem #3

Answer

(a)

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
E	B	J	A	K	D	C	H	G	I	L	F

(6 pt) [1 point is deducted for each incorrect answer.]

(b.)

13. 神、乘、樹

14. 可、確

15. 同、團

16. 像、將

(6.5 pt)

(c.)

17.

18.

19.

20.

(5.5 pt)

[13.-20. Scoring criteria are as described below.]

question	13.	14.-16. 18.-20.	17.
number of correct answers	three	two	one
points	2	1.5	1
for the presence of 1 correct answer	0.5	0.5	
for the presence of 2 correct answers	1		
for the presence of all correct answers	2	1.5	1
for each additional incorrect answer	0.5 point is deducted.		

For question 17, (小), no point will be given if a written answer's two side dots are too long that the entire character is considered (水).

(d.)

21. 受盡壓迫好可憐

22. 面前亦沒乘涼樹

(2 pt)

Reference

Gao, Yinxian; Yi, Nianhua; Hu Chishu; Gong, Zhebing. (1991) *Nushu: The World's only Female-only Script.* Taipei: Awakening Foundation.

Huang, Xuezhen. (1993) *Studies of Jiangyong Dialect.* Beijing: Social Sciences Academic Press.

Problem #4

The word order is SOV.

The subject marker is suffix **-i**.

Tenses and aspects of verbs are as below:

	present	past
perfect	*STEM*-**di-ko** *PRON* **yese**	*STEM*-**di-ko** *PRON* **yetsha**
progressive	*STEM*-**ya-ko** *PRON* **yese**	*STEM*-**ya-ko** *PRON* **yetsha**
habitual	*STEM*-**tta-ko** *PRON STEM*-**ne**	*STEM*-**tta-ko** *PRON STEM*-**tsha**

The following rules are applied if the stem *(STEM)* is end up with a nasal consonant:

-m + **-di-** → **-ndi-**

-m + **-ya-** → **-ngiya-**

-m + **-tta-** → **-ma-**

-m + **-tsha** → **-ngitsha**

Pronouns *(PRON)* are as described below:

person	singular		plural
I	**ta**		**hu**
II	**ne**		**hi**
III	*masculine* **e**	*feminine* **i**	**u**

Shaded cases are absent in this problem.

Answer

(a)

11. *I have listened to the God.*

12. *He was seeing water.*

13. *The lion was drinking beer.*

14. *You (pl.) had seen the sheep.*

(8 pt) [2 points for each question. 1 point for tense and aspect, and 1 point for the rest part of the sentence.]

(b)

15. **Olo doro woondiko ne yetsha.**

16. **Kanai yoottako e yoone.**

17. **Atsho muuttako u muutsha.**

18. **Hatte garma siiyako hi yese.**

(12 pt) [3 points for each question. 1 point for noun, pronoun, and adverb, 1 point for tense and aspect, and 1 point for the rest part of the sentence. 0.5 point is deducted for each misspelling irrelated to morpheme boundary.]

Reference

Mendisu, Binyam Sisay. (2010) *Aspects of Koorete Verb Morphology.* Köppe: Cologne.

Problem #5

The pronunciation of vowel letters is as described below:

grapheme	a	á	e	é	i/y	í/ý	o	ó	u	ú/ů
IPA value	/a/	/aː/	/ɛ/	/ɛː/	/i/	/iː/	/o/	/oː/	/u/	/uː/

The pronunciation of consonant letters is as described below:

	grapheme	t	d	k	g	ch	h	n	r	
soft	IPA value	/t/	/d/	/k/	/g/	/x/	/ɦ/	/n/	/r/	
hard	grapheme	ť	ď	š	ž	c	č	ň	ř	j
	IPA value	/c/	/ɟ/	/ʃ/	/ʒ/	/t͡s/	/t͡ʃ/	/ɲ/	/r̝/	/j/
neutral	grapheme	p	b	f	v	s	z	m	l	
	IPA value	/p/	/b/	/f/	/v/	/s/	/z/	/m/	/l/	

The pairs of consonants in cells with thicker lines represents a voiceless-voiced pair of consonants with the same place and manner of articulation. The consonants in non-shaded cells are voiceless, and those in shaded cells are voiced.

For /uː/, the letter **ú** presents only in the beginning of a word, while **ů** presents in the rest circumstances.

For /i/ and /iː/, **i/í** cannot follow hard consonants, and **y/ý** cannot follow soft consonants.

The following phonological rules are applied on the voiceless-voiced pair of consonants only.

Final devoicing. The word final voiced consonants are devoiced.

Voicing assimilation. The voiceless consonants are voiced when preceding voiced consonants. The voiced consonants are devoiced when preceding voiceless consonants.

Letters and phonological rules that are absent or irrelated to this problem are omitted here.

Answer

(a)

21. [pɪvo] (1 pt)
22. [vɛt͡ʃɛr̝ɛ] (1 pt)
23. [otpolɛdnɛ] (2 pt) [0.5 point for [odpolɛdnɛ]]
24. [opxot] (3 pt) [1.5 point for [obxot] or [opxod], and 0.5 point for [obxod]]
25. [locka] (2 pt) [0.5 point for [loɟka]]

(b.)

26. **mléko** (1 pt)
27. **zvůle**, **svůle** (2 pt)
28. **účastnyce**, **účaztnyce** (3 pt)

29. **noviny**, **novyny** (2 pt)

30. **mýt**, **mýd**, **míd**, **mít** (3 pt)

[0.5 point is deducted for each additional incorrect answer. 1.5 (question 28)/1 (the other questions) point is deducted for each absence of correct answer.]