

Multiple Choice

1	C
2	B
3	A
4	A
5	C
6	B
7	C
8	D
9	A
10	A

Free Response

- 11) STANDARD
- 12) "THERE ARE NO DULL STORIES. PEOPLE ARE FULL OF WONDER." - JON BOIS
- 13) ART IS A LIE THAT TELLS THE TRUTH.
- 14) COCONUT WATER
- 15) "I DON'T KNOW WHERE I'M GOING FROM HERE, BUT I PROMISE IT WON'T BE BORING." - DAVID BOWIE
- 16) "EDUCATION IS OUR PASSPORT TO THE FUTURE, FOR TOMORROW BELONGS ONLY TO THE PEOPLE WHO PREPARE FOR IT TODAY." - MALCOLM X
- 17) "IF THE WORLD CHOOSES TO BECOME MY ENEMY, I WILL FIGHT LIKE I ALWAYS HAVE." - SHADOW THE HEDGEHOG
- 18) "THERE'S PLENTY OF ROOM AT THE BOTTOM." - RICHARD FEYNMAN
- 19) "ASK NOT THE SPARROW HOW THE EAGLE SOARS!" - SATSUKI KIRYUIN
- 20) I LOVE YOU
- 21) THUNDERCLAPS

Puzzles

- 22) "TURTLES HAVE IT FIGURED OUT, MAN." - XKCD
- 23) WRITE IN L^AT_EX!
- 24) LIFE

- 1) Additionally, none of the other choices are transposition ciphers. C
- 2) This is why W does not follow the standard pattern in the Braille alphabet. B
- 3) Unicode extends ASCII to 32 bits per code point, though as of 2025 only 21 bits are needed. A
- 4) As of 2025, three of the four Kryptos walls have been solved. A
- 5) Dancing Man comes from *Sherlock Holmes*, Gallifreyan comes from *Doctor Who*, and Zoni comes from *Ratchet and Clank*. C
- 6) Crypto1 is used RFID chips, WEP is severely flawed, and Rovert is not a real thing. B
- 7) This was the primary weakness of the Enigma cipher that was crucial to breaking it. ROT-26 is the identity. Messages consisting of Y's and Z's are not modified for the keyword cryptogram. An unkeyed four-square cipher maps any double-letter to itself. C
- 8) Atbash uses $a = -1$, and Caesar uses $a = 1$. The plaintext is the trivial case $a = 1, b = 0$. D
- 9) Eve is an antagonist, eavesdropping on the message Alice sends to Bob. Alice and Bob originated from the paper introducing the RSA cryptosystem. A
- 10) The distress signal is “dit dit dit dah dah dah dit dit dit” as one single sequence, not individual letters. SOS is a mnemonic for remembering the signal, and “Save Our Ship” (or Souls, or anything else) is a backronym. A
- 11) The first letters of the eight questions containing letters spell the word **STANDARD**.
- 12) Noting how there are seven groups of seven letters, arrange the blocks in a square. In a counterclockwise inwards spiral that begins from the top left, the message found reads "THERE ARE NO DULL STORIES. PEOPLE ARE FULL OF WONDER." - JON BOIS.

TOEPSEI
 HPDNOWR
 ELEIOFO
 RERSBOT
 EAJONLS
 AREFULL
 RENODUL

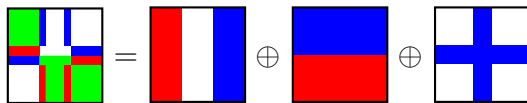
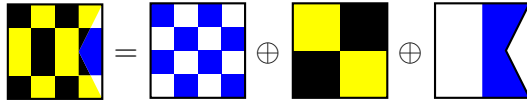
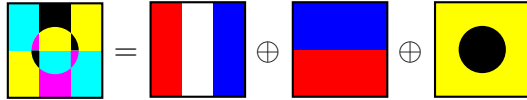
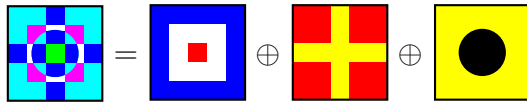
- 13) Two dummy sequences (the alphabet, and then the order of keys on a QWERTY keyboard) obstruct the message from view.

AwcItfLiiTaItfoLjrTzuTvxTm
 aRedSygIoJHsmTgpLksHxvRbyH
 qbTreAuhEpkAdnEhqSlteCwUnz

What is left reads **ART IS A LIE THAT TELLS THE TRUTH.**

- 14) Noting that each word has an odd length of either seven or five (and that the sentences themselves are centered on the page), the center letters of each word spell the (7,5)-enumerated phrase COCONUT WATER.
- 15) Noting the pattern of letters in the name of the speaker, it can be inferred that this is a keyword cryptogram. Some letters can be found through standard methods, such as D→I with the single-letter word, Q→N and V→T for a contraction following the word "I", and L→H H→E and T→R from the ABCDC motif that most often maps to either THERE or WHERE. The quote is "I DON'T KNOW WHERE I'M GOING FROM HERE, BUT I PROMISE IT WON'T BE BORING." - DAVID BOWIE.
- 16) Noting the pairs and no particular relationships seen between the letters in any given pair, this is a Playfair cipher (with no J, as per the test instructions). Decrypting spells "EDUCATION IS OUR PASSPORT TO THE FUTURE, FOR TOMORROW BELONGS ONLY TO THE PEOPLE WHO PREPARE FOR IT TODAY." - MALCOLM X.
- 17) GSV indicates that this is an Atbash cipher, where a letter is mapped to its reverse in the alphabet. This process yields "IF THE WORLD CHOOSES TO BECOME MY ENEMY, I WILL FIGHT LIKE I ALWAYS HAVE." - SHADOW THE HEDGEHOG.
- 18) The letters present in this cipher are DGKORSU, which along with W are the set of letters with three-pulse representations in Morse code. Writing out their equivalents as one long string of beeps and then adding separators according to the numbers shown below the cipher spells "THERE'S PLENTY OF ROOM AT THE BOTTOM." - RICHARD FEYNMAN.
- 19) The quote uses the alternate pigpen encoding, which represents the letters S through Z with the same symbols as A through I but with two dots (like how J through R are the same but with one dot). The numbers refer to the position of the letter in its respective 3-by-3 grid, as on a number pad. The speaker of the quote is given in normal Pigpen to hint at what to do for the main quote. The message spells "ASK NOT THE SPARROW HOW THE EAGLE SOARS!" - SATSUKI KIRYUIN.
- 20) Each of the five waves of a heartbeat is either a short or long version. Converting from five-bit-binary (1 is long, 0 is short), 01001 01100 01111 10110 00101 11001 01111 10101 translates to I LOVE YOU.
- 21) In each column of the table, the left column is letters of the alphabet (in order) represented as maritime flags. The right columns contain the letters A through L, which can also represent 1 through 12. Unindexing the letters using those numbers spells THUNDERCLAPS.
- 22) Separating this into RGB triplets, each symbol represents three separate Braille letters. When concatenated, they spell "TURTLES HAVE IT FIGURED OUT, MAN." - XKCD.

- 23) The top set of Maritime signal flags spell **USE XOR** with the given letter ordering, then shows the results of those triplets of letters xor-ed together as an example.



The triplets of flags, ordered by the indexing, spell **WRITE IN L^AT_EX!** Which, as the author, I highly recommend all test-writers to do!

- 24) The number factorizes as $2^{12} \cdot 3^9 \cdot 5^6 \cdot 7^5$. Converting the exponents to letters spells **LIFE**.