ARCANE GAME

Episode 1 - The Classics

1. The Classic
mess + sage = message

2. The Typical
bat + man = batman

3. The Usual
disc + cord = discord

4. The Standard
tooth + brush = toothbrush

5. The Definitive
Use the answers from the previous questions: "message batman discord toothbrush". Meaning that you should send a message to the bot batman on discord saying "toothbrush". When you do, you get back an image with a plus sign and a sumbol representing "out". Use the avatar image for the bot as the first part, and black + out = blackout

Episode 2 - Shoot for the Stars

1. Inspirational Poster
Look outside of the art board using a pdf editor and you'll see a hidden text saying that the password is roommates

2. ACDC
There are four power sockets displayed in the image. Each socket type can be identified by its type, and every type has a designated letter. Combine the letters, and get the word life.

3. Poem Critic
You need to write a nice poem. Here is one that works:
    Some small soapy scallops screamed slowly surrounding some slank seaweed. Same slick salty scallop shouted smart-ass searching something smart sorted. Seagull sagas smelled someone soft.
    Pseudonym: S
    If you get it right you get the password support.

4. Great Summary
In each of the images, there is something that includes either "long" or "short" in its name. oolong, longboat, everlong, footlong, shortcut, furlong. Split the rows, and you can see it as — -.-, which is morse for ok.

5. CD
As indicated by the album cover your task is to find the name of track number 18. The normal buttons do not work very well and the player turns off if you do something wrong so getting to track 18 is not easy. You can either just brute force it and try around until you figure it out. This is maybe the easiest way but what the buttons do is this:
    The TA button multiplies the last digit of the track number with 13 and depending on your EQ setting does different modulo:
    EQ JAZZ: Modulo 10
    EQ FLAT: Modulo 9
    EQ ROCK: Modulo 8

EQ MEGA BASS: Modulo 7

This is then added to the first digit, if there is any.

You can also use next and previous, both add one to the track but each can only be used once and previous only works in MEGA BASS, and next only works in JAZZ.

One solution is this:

Power on

Switch mode to CD

Set EQ to JAZZ

Press TA twice to get to track 9

Press next to get to track 10

Switch EQ to MEGA BASS

Press previous to get to track 11

Switch EQ to ROCK

Press TA once to go to track 15

Switch EQ to FLAT

Press TA twice to get to track 18

The track title is sacred convent

6.   Unbalanced

The scrambled text is actually regular text but has a font that switches letters around. Applying the font to the title "unbalanced" results in humorously.

7.   Known For

Use the answers from all the tasks in the epic and google them together with the years. You'll find that Rasika Dugal has starred in shows where the answers make up half of the titles. Take the remaining parts of the titles and get, order from the years, "yours permanent life support computer". This may be enough to hint towards pacemaker. The answer from the task with two words "sacred convent", is missing "heart", which is the name of the school she attended.

Episode 3 - Ancient Components

1.   Make it Rain

The background color of the image can be seen as a six-digit code in hex. Index each of the six words with the number in order, the indexed letters spell out the word triton.

2.   Blow my Mind

The first hint to solve this is the faint letter "E" in the image. This is a hint that the line adjacent to the letter means "E". Following each line from the root, there are always three nodes along the way, and each segment between nodes jumps over 0, 1, or 2 lines. This way you can interpret any line as a three-digit ternary number. This system can describe numbers up to 27, which is a good hint that interpreting the numbers as letters could give something nice. In this case the word tinderbox.

3.   Fraudroads Game of Fire

This is similar to Conway's game of life, as hinted in the title. Pixels in the image can be "burned", and the ashes can be white or black. Pixels next to the burning ones will also be set on fire, if they can be burned. The rule is that if a pixel is more red than blue it can be burned. Ashes are white if there is more than 50 percent red, black otherwise. Start by burning pixel 1,1 in the image, and go on until no more pixels are burning. The white ashes will spell out the word liquify.

4.   Ground Truth

The image in the task seems to be irrelevant, at least on the surface. From the word document, you can extract a table that contains 10 rows and 3 columns. The columns are named "horizontal", "vertical", and "thing". Half of the rows contain images in the first two columns, and the rest are empty. All of the values in the "thing"-column refers to one of the primary colors red, green, or blue. The images that can be found in some of the rows each represent some number. Each pair of numbers have some theme (roads, bus lines, elements, albums, card games), and represents a pixel in the image. Going to the respective value for the referenced pixel and color, you will find values that happen to be possible to interpret as ASCII for the letters S?N?TA??O?. Using some pattern matching method, you'll find that the only English word that fits is sanitation.

5.   Quintessence

This is an epic, so you should typically solve the other puzzles in the round first. Using each of the solutions from the other puzzles as an answer, you'll get back a new file as a hint. Each of the other puzzles can be related to an element. Using the image of the elements, and the hint "rotate methods clockwise", apply the method from "Blow my mind" (air) to "Make it rain" (water), and so on. The files contain the necessary data to do this. You'll end up with a second solution for each of the other puzzles, that will fit into the crossword. Some of the cells in the crossword are colored. Order these cells by the color/hue, and the letters from those cells will spell out "counter acidic", which is of course basic.

Episode 4 - A Recipe for Success

1. Snack Time

Check the magnets and shot glasses and you will find that they all correspond to either a country or a city. Ignore the shared countries and cities. The unique ones spell PRAN and DIAL, so the answer is prandial.

2. Parking

The registration plates of each of the Italian cars can be used as a mini crypto. Take the letters, and for each letter rotate the number specified by the digit in the same place. This way RSN188 becomes SAV, and YLN226 becomes ANT, combining to savant.

3. Summoning

The original image has been slightly edited. 5 new symbols appear close to the star in the center. Each symbol is a tally mark and represents a number between 1-5 or 1-10, depending on what tally mark system is used. The letters spell out beach, which is the answer.

4. Abstract Art

Start following the line from the bottom left as if you were drawing it. Whenever the line makes a turn such that the next line segment would cross an already existing one, measure the outside of the angle of the turn that was just made. If a line segment crosses multiple others, include it twice. Interpret the angles as ascii, and it will spell guillotine.

5. The number

To get the number referenced in the text, make some script that implements the rules. Or perhaps enough of them, and do some manual filtering. You'll eventually get the number 1246354347. Then the trick is to represent "shogun" as another number, by interpreting it as base 26 (where a = 0, b = 1, etc). You'll get that shogun is the number 217314253. Then subtract the numbers, and convert the result back to base 26 as you did with shogun but backward. The end result is the word dipware.

6. Algorithm

This task is about cryptography, and the image describes a cryptographic algorithm. There are three boxes in the image, one P-box, one S-Box, and one X-Box. These refer to permutation, substitution, and XOR, respectively. Using the colored lines, you get an example of the algorithm. Three colors can together be represented as 9 bytes, RGBRGBRGB. Using this, you can see input and output to each of the boxes, and figure out what happens inside them. The first box moves the bytes around in the 9-byte word, the second box substitutes each input byte for another one - the pattern is that the hex is reversed, and the last box does XOR with a secret internal 9-byte word. Once you have figured out the inner workings of each box, you can put any 9-byte word into the algorithm to get something else out. If you input the name of the task "ALGORITHM", the result is "mindfucks".

7. All the Things I Wanna Do

This is an epic, so in this solution it is assumed that you have the answers to all the other puzzles in the round. First, fill in the previous answers in the spaces in the image. Some of the letters are highlighted and by putting these letters into some pattern matching or anagram solver, you'll get "message". If you put that into the system, you'll get a message back telling you to "look for shades in the dark". Some of the letter markers have some extra information on another, yet very dark, color. This can be interpreted as binary, which gives you a new set of highlighted letters, that also has an order. This time you get "Linda's bucket list", which when entered into the system gives you a bucket list of 6 items, and a reference to some secret thing she wants to learn. Each of the items on the bucket list can be paired with one of the answers lengthwise. When doing this, some letters are the same in both the bucket list and your answer list. Take these letters, rearrange a bit, and learn to curl.

Episode 5 - Quality Routines

1. Verbis Novis

Each word in the text is in a different language, originally translated word by word from the phrase "Why this answer is not enough?". If you take the language code for each language, it will form the word ethanolamine. This task uses ISO 639-1.

2. You Must Choose, but Choose Wisely

Given the five images in the zip file, do as it says in the task "discard a couple, but keep most". Discard two of the images, and keep three. Then merge them by logical XOR, "exorcist" is a hint to this. If you selected the correct three images, you'll get a QR-code, which is a link to a nice video. The video is unrelated, but if you apply the same logic to the filenames of the three correct files, you get a hex-string that can be interpreted as ASCII, resulting in pikemen. This task uses ISO 18004.

3. Once Upon a Time

First, use the small image to get the password to the zip file. Each channel in the image (R, G, and B) can be interpreted as three braille characters. This way you get the zip password "voracious". In the zip-file you find 11 small images and a text file with a story in it. The story is about a man named Mr. Dent, and in the story there are lots of hints to the fact that Mr. Dent is in fact a bacteria living in a mouth. Following his story, you can find out that he lived in a number of different houses (teeth). There are a number of different systems for referring to the teeth in the human mouth. Converting his addresses from the international standard (the house numbers) to the American standard (as hinted in the story), you'll end up with some numbers conveniently in the range of the letter numbers. Get them to letters, and the word lactiferous appears. This task uses ISO 3950.

4. Improvement Plan

In the image, there is one part that looks like a crossword puzzle, and one part that looks like hints to the words. For each row in the crossword, there are two different colors, and each hint also has two different colors. Some hints have a row in the crossword that matches both colors, and these can be filled in. There is always one short word that is interleaved in a longer word. For example: The first row corresponds to the last hint, and the word that fits is AERIAL (in the air), which contains ERA (period). For the colors that do not match, you can find pair-up lines with hints if you invert one or both colors. For the inverted colors, the hint is inverted. For example: The "Your few" hint has both colors inverted and should be MANY, which contains MY. After doing all this you are left with the line of bigrams in the middle of the crossword. Any bigram in all the words corresponds to a US state. The title hints at the use of ZIP-codes, and the first number of the ZIP code is constant in any US state. Using this, convert the states in the middle of the crossword to a series of numbers. This number is in fact an ISBN number, which is easily searchable online. It refers to a book by the name of Zip Code atlas. This task uses ISO 2108 and 3166-2.

5. Instructions

In the story in the task, you'll get the notes for a weird quiz, a photo of half a page from a notebook, and a zip file with some files in it - both some password-protected zip files, and some photos from Lisa's apartment. While it is technically possible to solve the task with just the note for the quiz, it is probably more feasible to do if you use the rest of the clues as well.

In the task it is mentioned that Lisa might work at IKEA, while that's probably not true, she likes to use the names of IKEA furniture as passwords. In the images from the apartment, there are three different items from IKEA. A dresser called MALM, a fruit bowl called STOCKHOLM, and a bathroom rug called TOFTBO. These passwords will open the three zip files. One contains something of a love letter from Lisa, one contains the missing part of the notebook page, and the last one contains 10 charts - the "sidequest".

By piecing together the two page halves, you get something like an instruction on how to use the quiz note, and the sidequest is also mentioned as related to a secret part of the instructions. Each of the charts in the sidequest corresponds to one line on the quiz note. And each chart is a breakdown of the colors in the flag of some country. Later on it will be nice to have a country associated with each line, and these flag-charts can be used to disambiguate in some cases.

Now, following the instructions, treat the first number as input data, the question as an index, and the number in parenthesis as a metaindex. The metaindex is a reference to a specific word in the question, "indexing the index" so to speak. Each of these words is very similar to a currency. Using the sidequest you can make sure you have the right currency. The input data is the numeric code to the respective currency, and it can be transformed into a three-letter acronym. This is the "secret method" in the instructions. Lastly, the answers to the actual questions are all numbers from 1 to 3, use these to index the acronyms, and finally arrive at the word meteoritic. This task uses ISO 4217.

6. Grand Procedure

This is an epic, so this solution assumes all the other tasks in the round are solved. In the solutions for each of the other tasks, there is an ISO-standard that is somehow used to solve the task. In one case there are actually two. The numbers of these standards fit nicely into the boxes on the left side of the map, in numeric order. The answer from each of the tasks fits on the right side, even though there is some ambiguity about the length of each answer.

The lines and boxes in the map are all mathematical operators. There are five operators, and they are plus, minus, multiplication, division, and powers. Using the numbers from the ISO-standards, you can arrive at three new numbers per answer on the right. One of these numbers tells you the length of the answer (which could be a help for backsolving), and the other two are indices in the answer. You can figure out which operator is which by using the lengths of the task answers and working backwards to the ISO numbers. Then computing the rest, and using the indices in the answers from the previous tasks, you arrive at the final made-up word healstrike, the most standardized way to repair a bowling alley.