Round 13: Tossups

1. After his arrival in the Grand Isle, one character notices that his wife is badly sunburnt despite going for a swim at the start of this novel. Doctor Mandelet asks if the main character has been associating herself with "pseudo-intellectual women" after her husband expresses his concerns about her. Even though he is in (*) Mexico, Robert Lebrun is longed for by the main character, who regrets nearly being seduced by Alcee Arobin and is concerned for her fidelity to Leonce. For ten points, name this 1899 novel about Edna Pontellier written by Kate Chopin.
ANSWER: **The Awakening**

2. This virus has a roughly-spherical envelope with proteins gp41 and gp120 on the outside, and produces 9 genomic products with just a 9.2 kilobyte genome. A consequence of this virus was initially referred to as GRID because rare conditions such as (*) Kaposi's sarcoma and *Pneumocystis jiroveci* pneumonia began occurring in large numbers in drug users and gay men. This retrovirus can be transmitted via bodily fluids and infects CD4+ T cells. For ten points, name this virus which causes Acquired Immune Deficiency Syndrome.
ANSWER: **H**uman **I**mmunodeficiency **V**irus (do not prompt on AIDS)

3. Severus and Maximin, not Constantine, were the benefactors of one of these events at Nicomedia in 305. Yuan Shikai negotiated one of these events in 1912, in which the Republic of China would annually pay 4 million silver taels to Puyi. An amendment to the Imperial (*) Household Act would be required for Emperor Akihito to perform this action, while Edward VIII did this to marry Wallis Simpson, allowing George VI to become King. For ten points, name this action taken when a monarch vacates their throne.
ANSWER: **abdication** (accept word forms)

4. In one joint work, this artist completed the angel Gabriel using lead-free paint, while with the same collaborator he painted an angel holding the robes of Jesus. *Annunciation* and *The Baptism of Christ* were created during his apprenticeship to Andrea del (*) Verrocchio, before he moved to Milan where he composed two nearly identical works featuring the young John the Baptist and Jesus. This painter of *Virgin of the Rocks* was commissioned to depict a scene in the Gospel of John when Jesus announces that one of the Twelve Disciples sitting beside him will betray him. For ten points, what Italian painter created the *Last Supper*?
ANSWER: **Leonardo** **da Vinci** (accept either part)

5. The first statement of this text is known as the Mul Mantar. This book is divided into sections based on how they are to be sung known as ragas. Physical copies of this book are prominently displayed on an altar in each (*) Gurdwara. This book explains the five thieves that must be conquered by the virtuous, and is the result of Gobind Singh adding Tegh Bahadur's hymns to the Adi Granth. The only city where copies of these books may be produced is Amritsar in the Punjab. For ten points, name this final living teacher, the central religious text of Sikhism.
ANSWER: Sri **Guru Granth Sahib** (accept **Adi Granth** before mentioned)

6. BellKor's Pragmatic Chaos won a competition held by this company to improve predicting user preferences. Russian Minister of Culture Vladimir Medinsky accused this company of a U.S. government plot to increase soft power. This company founded by Marc Randolph and Reed Hastings was involved in a lawsuit over its practice of (*) throttling, and it was once the largest corporate user of the United States Postal Service so it could deliver DVDs. One series produced by this company features a missing child in the town of Hawkins, Indiana. *Stranger Things* is produced by – for ten points – what video streaming service?
ANSWER: **Netflix** Inc.

7. In this work, a pregnant Eve is holding a citrus fruit and is directly next to a pair of musicians playing the organ and the guitar. The words "*Ave gracia plena domincus tecum*" are inscribed next to the Archangel Gabriel as he holds a pair of lilies. (*) Phillip the Good appears alongside other horsemen among the Just Judges while Cain is depicted killing Abel in the top right. John the Baptist and the Virgin Mary sit directly next to a figure wearing a crown and red garbs as they hold open books in their laps. The central panel depicts a crowd around a lamb whose blood fills a chalice. For ten points, name this work by Hubert and Jan van Eyck.
ANSWER: *__Ghent Altarpiece__* (accept *__Adoration of the Mystic Lamb__* or *__Het Lam Gods__*)

8. In one work by this author, the title character's cruelty towards animals grows to the point where he kills a valley of deer, after which a stag curses him to kill his parents. That short story is *Saint Julian the Hospitaller*. This author set a novel during the Mercenary Revolt in (*) Carthage where the title daughter of Hamilcar Barca is seduced by Matho. In this author's most famous work, the title character engages in affairs with Leon and Rodolphe and commits suicide when she can't make enough money to pay off her debts. For ten points, name this author of *Salammbo* and *Madame Bovary*.
ANSWER: Gustave **Flaubert**

9. A man with this surname became the military governor of Tennessee through executive appointment in 1862, but consequently lost his land and slaves while having his home turned into a military hospital by the Confederates. Another person with this name said "where flowers bloom, so does hope" in support of the (*) Highway Beautification Act. A Texan politician with this surname launched his "War on Poverty" through a set of reforms known as the "Great Society". For ten points, give the surname shared by the 17th and the 36th Presidents of the United States.
ANSWER: **Johnson**

10. The Babcock model describes these phenomena using a dynamo, and their quantity is represented by the Wolf number. These phenomena peaked in 1859 during the Carrington Event. These objects obey Spörer's law, by which they are on average at 15 degrees (*) latitude at the maximum of their 11-year cycle. They come in opposite magnetic polarity pairs, and Alexander Wilson proved that these features were not distinct objects but rather depressions of the photosphere. For ten points, name these cool, dark regions of the Sun.
ANSWER: **sunspot**s

11. *The Freedom Fighter's Manual* was a comic airdropped to support these groups, which opposed the FSLN. After the US congress subsequently blocked funding for thes groups, Lieutenant-Colonel Oliver North devised an intricate plan to aid these groups that involved (*) illicit arm sales to Iran. The fallout caused by the uncovering of this scandal damaged Ronald Reagan's presidency. For 10 points, name these Nicaraguan militant groups that undermined the Sandinista government and whose common name literally translates to "against".
ANSWER: **Contra**s

12. One string quartet of this number by Shostakovich is dedicated "to the victims of fascism and the war" and begins with the D-S-C-H motif notable of its composer. A symphony of this number by Dvorak ends with a chromatic coda with prominent brass. Another symphony of this number by Mahler is known as the "Symphony of (*)** a Thousand" and is partly based off Goethe's *Faust*. One piano sonata of this number written by Beethoven is nicknamed the *Pathetique,* and is keyed in C minor. Schubert's *Unfinished* Symphony was designated, for ten points, what number, the number of players in an octet?
ANSWER: **eight**

13. The Lotus Temple in New Delhi is a place of worship for this monotheistic religion. The holy book of this faith is believed to supercede earlier revelations and is called the Kitáb-i-Aqdas. It's not (*)** Zoroastrianism, but it faces persecution by the Shia-majority government in the country where it was founded, Iran. This religion's adherents believe that Zoroaster, Muhammad, Moses, and Krishna are all manifestations of God. This faith, based in Haifa, is governed by the Universal House of Justice. For ten points, what Abrahamic religion was founded by Bahá'u'lláh?
ANSWER: **Bahá'í**

14. The northeastern part of this country has two wet seasons known as *vuli* and *masika*. Mary Leakey discovered the "Nutcracker Man" in this country's Olduvai Gorge, which helped demonstrate the evolution of humans in Africa. This country has a disputed border on Lake (*)** Malawi, while the the Pangani River flows into the Indian Ocean and has its sources at Mount Meru and the highest volcano outside of South America, also the tallest mountain in Africa. Mount Kilimanjaro is in – for ten points – what country home to Serengeti National Park?
ANSWER: **Tanzania**

15. In the prologue of one work by this man, the narrator loves "Peter's great creation" for its "view of stern and grace." That work, which was inspired by an Etienne Falconet piece, discussed how the title character will create a city that will scare the Swedes and "Cut a door to Europe wide". (*)** Tatyana moves the title character of another work who notes that, "It brought to life, instantly, those feelings, so long quiescent; that's no ready compliment". Lensky challenges the title character to a duel and was betrayed by Olga when she danced with the title character. For ten points, name the author of *The Bronze Horseman* and *Eugene Onegin*.
ANSWER: Alexander **Pushkin**

16. In the 1840's, Gabriel Lamé incorrectly assumed unique factorization in the complex numbers to prove this result, Gerhard Frey later linked it to the modularity theorem. Richard Taylor aided his doctoral advisor in repairing the proof of a related result to this statement, the (*)** Taniyama-Shimura-Weil conjecture. This result's namesake contended that he had "a truly marvelous proof of" it, but only in the 1990's was it finally proved by Andrew Wiles. For ten points, a to the n plus b to the n plus c to the n has no integer solutions for n greater than 2 is what theorem, first stated by a French mathematician in 1637?
ANSWER: **Fermat's Last** Theorem or **Fermat's conjecture**, prompt on **FLT**

17. The Nineteen Lords from this country devised a Grand Design which included the capture of parts of Mauritania and Brazil. After allying with Rajasinghe II, this nation laid siege to Colombo, then ruled by the Portuguese. This European country traded at Dejima under the policy of (*)** *sakoku*, which made it the only Western nation to trade with Japan for over two hundred years. Other Asian holdings of this country include Malacca and Jakarta, with the later part of Indonesia as its "East Indies". For ten points, which country established modern-day New York as New Amsterdam?
ANSWER: **Netherlands**

18. In materials exhibiting this phenomenon, circulation of vortices is quantized in units of the Planck unit divided by particle mass. One material with this property has thermal conductivity dependent on temperature gradient; that substance exhibits second sound, where heat transfers through (*) waves. In the fountain effect, Rollin films with this property "creep" up container walls against the force of gravity. This phenomenon appears past the lambda point in helium-4. For ten points, what property is exhibited by liquids with zero viscosity?
ANSWER: **superfluid**ity

19. Philip and Dolly Clandon are twins in *You Never Can Tell*, which forms part of his "Plays Pleasant" trilogy. In another part of that series, Eugene Marchbanks confesses his love for the main character in front of her husband, James (*) Morrell. That character, Candida, makes both men state their case and ends up choosing her husband stating that, "I give myself to the weaker of the two". In this playwright's most famous work, Professor Higgins and Colonel Pickering make a bet as to who can get rid of Eliza Doolittle's cockney accent first. For ten points, what Irish playwright wrote *Man and Superman* and *Pygmalion*?
 ANSWER: George Bernard **Shaw**

20. The northeastern part of this country has two wet seasons known as *vuli* and *masika*. Mary Leakey discovered the "Nutcracker Man" in this country's Olduvai Gorge, which helped demonstrate the evolution of humans in Africa. This country has a disputed border on Lake (*) Malawi, while the the Pangani River flows into the Indian Ocean and has its sources at Mount Meru and the highest volcano outside of South America, also the tallest mountain in Africa. Mount Kilimanjaro is in – for ten points – what country home to Serengeti National Park?
ANSWER: **Tanzania**

TIEBREAKER:

The motion of this island's tectonic plate has left Kohala extinct while allowing Loihi to grow. This island is the current terminus of an archipelago beginning with the Emperor Seamounts. Its largest city of (*) Hilo is one of the rainiest spots in the world, with over three-quarters of the year receiving some rainfall. A place on this island called Ka Lae is the southernmost point in the United States. Nearby snow can be seen on the peak of Mauna Kea, while Kilauea has been erupting continuously since 1983. For ten points, name this Pacific island that shares its name with the 50th state admitted to the Union.
ANSWER: **Hawai'i** (accept **Big Island**)

Round 13: Bonuses

1. In this play, a messenger announces that both princes have killed each other during the siege. For ten points each:
[10] Eteocles and Polynices battle for control of the title city in this Greek tragedy after Eteocles refused to abdicate for the year on the decree of King Oedipus.
ANSWER: **Seven Against Thebes**
[10] Seven Against Thebes is the third work in this playwright's trilogy whose other works include one about the murder of the King of Mycenae.
ANSWER: **Aeschylus**
[10] That work, *Agamemnon,* is the first work of this most famous Aeschylus trilogy concerning Queen Clytemnestra's murder and her death at the hands of the eponymous character.
ANSWER: **Oresteia**

2. Paper can be used to make many forms of art. For ten points each:
[10] Name this traditional Japanese art of folding and then cutting paper to create intricate patterns.
ANSWER: **kirigami** (do not accept origami)
[10] This form of paper is used to make the traditional German Froebel star, and is pinched in Quilling and twisted in Heinz Strobl's Knotology.
 ANSWER: paper **strips**
[10] This art form using paper soaked in adhesive can be used to make three-dimensional figures, including dolls, masks and sculptures.
ANSWER: **papier-mâché**

3. A major proponent of this philosophy wrote the Meditations. For ten points each:
[10] Name this philosophy which holds that virtue is all that is needed for happiness and that self-control can help mitigate the impact of destructive emotions.
ANSWER: **Stoicism**
[10] This Roman Stoic philosopher wrote, "On the Shortness of Life" and "On Anger" before Nero ordered him to commit suicide for his alleged role in the Pisonian conspiracy.
ANSWER: Lucius Annaeus **Seneca** the Younger
[10] Seneca's work, "On Clemency" was this type of work made to inspire self-reflection in royalty so that they would lead better. Machiavelli wrote one example of this type of work.
ANSWER: **Mirrors for Princes** (accept any answer involving both **mirror**s and **prince**s)

4. Basketball teams have "Big Threes," but orchestras have a "Big Five." For ten points each,
[10] This orchestra toured North Korea in 2008, where they played former music director Leonard Bernstein's Overture to *Candide.* This orchestra currently plays at Lincoln Center.
ANSWER: the **New York Philharmonic** (accept abbreviations, like "NY Phil")
[10] This orchestra plays summertime concerts in the Koussevitzky Music Shed at Tanglewood. Its "Pops" orchestra plays a concert near the Charles River every Fourth of July.
ANSWER: the **Boston Symphony** Orchestra (accept **BSO**)
[10] The brass section of this orchestra is famous for its sound and power. This orchestra recorded most of the music for Fantasia 2000, and was directed by Sir Georg Solti for 22 years.
ANSWER: the **Chicago Symphony** Orchestra (accept **CSO**)

5. This man crucified the pirates that kept him captive. For ten points each:

[10] Identify this man who declared himself Dictator for Life shortly before being murdered at the feet of a statue of Pompey on March 15, 44 B.C.E.

ANSWER: **Julius Caesar** (probably prompt on one of them)

[10] Stories of Caesar's time with pirates, as well as information about his fashion choices, come from this biographer's *Lives of the Caesars*.

ANSWER: **Suetonius**

[10] Suetonius is also responsible the more outlandish stories about this brief-lived Roman emperor who supposedly planned to make his horse Incitatus a consul and ordered soldiers to collect sea-shells in a war against Poseidon.

ANSWER: **Caligula** or **Gaius** Julius Caesar Augustus Germanicus

6. The value for this constant is 96,485 coulombs per mole. For ten points each:

[10] This constant, equal to the charge of one mole of electrons, is named after an experimentalist who partnered with the mathematician James Clark Maxwell.

ANSWER: **Faraday** constant

[10] This electromotive force between an anode and a cathode is typically measured in volts. By convention, this value is zero for the reaction $2H^+ + 2e^- \rightarrow H_2$ (two h plus plus 2 e minus goes to h 2).

ANSWER: **Electrode potential**

[10] This equation gives reduction potentials based on electrode potentials and the conditions of the electrode. This equation is used by battery designers to determine how batteries' voltage will be affected by changing temperatures and by use.

ANSWER: **Nernst** Equation

7. At the start of this short story, the narrator moves into a brownstone apartment with the unnamed character who is a writer. For ten points each:

[10] Name this short story in which Holly Golightly is caught in a drug scandal and is abandoned by her husband Jose.

ANSWER: **Breakfast at Tiffany's**

[10] Breakfast at Tiffany's was written by this author who wrote about the murder of the Clutter Family in *In Cold Blood*.

ANSWER: Truman **Capote** (Cah-poh-tee)

[10] Holly tries to catch up to the narrator but ends up losing her child after overexerting herself in this activity.

ANSWER: **Horse Riding** (Accept any answer that describes Riding Horses)

8. For ten points each, answer some questions about board games:

[10] This board game, originally published by Parker Brothers and now owned by Hasbro, features property buying and selling. If a player is sent to jail in this game, they do not pass go and do not collect 200 dollars.

ANSWER: **Monopoly**

[10] This is the most expensive property in Monopoly. A hotel on this property costs two thousand dollars to build.

ANSWER: **Boardwalk**

[10] In this German board game, cities are constructed with ore and grain. Cities are worth two victory points out of the ten required to win this game.

ANSWER: The Settlers of **Catan** or Die Siedler von **Catan**

9. Liquids utilize this process try to maintain a level of low viscosity. For ten points each:

[10] Some ways to accomplish this task include the undervolting and liquid submersion, though this task is usually done by fans in a home computer system.

ANSWER: **cooling** (accept clear knowledge equivalents)

[10] Liquid cooling is used in the Aquasar and Cray models of this type of device, while Titan uses large heatsinks.

ANSWER: **supercomputer**

[10] This theoretical type of supercomputer would completely surround a star, using the stellar radiation to power the processing and much more energy consuming cooling systems. It is named after russian nesting dolls.
ANSWER: **Matrioshka Brain**

10. The *Tabula Rogeriana* was one of these things created by Muhammad al-Idrisi. For ten points each:
[10] Name these tools of navigation that chart the location of cities and countries all across the Earth based on latitude and longitude.
ANSWER: **Maps** (Do not accept or prompt on **cartograms**)
[10] This type of map projection is considered the standard and is characterized by meridians as straight lines where object sizes are distorted at higher latitudes named for its Flemish designer.
ANSWER: **Mercator** projection
[10] This other map projection utilizes sectors of equal area to represent land masses but experiences Tissot's indicatrices on the extremes, creating a cylinder.
ANSWER: **Gall-Peters** Projection

11. The Peace of Augsburg allowed Catholicism and Protestantism in this empire. For ten points each:
[10] Name this empire that centered around the Kingdom of Germany and whose first emperor was Charlemagne.
ANSWER: **Holy Roman Empire**
[10] The Holy Roman Empire was dissolved after this monarch abdicated following his defeat at the Battle of Austerlitz.
ANSWER: **Francis II**
[10] Francis II signed this treaty with Napoleon I calling for a truce as well as ceding all Austrian holdings in Italy and Bavaria to France.
ANSWER: Treaty of **Pressburg**

12. In this work, Bellman says that the title creature has a "fondness of bathing machines". For ten points each:
[10] Name this work about the search for the title mythical creature which was actually a Boojum after the Baker disappears.
ANSWER: ***The Hunting of the Snark***
[10] *The Hunting of the Snark* was written by this poet who wrote about Alice's adventures in *Through the Looking Glass*.
ANSWER: Lewis **Carroll** (Accept Charles Lutwidge **Dodgson**)
[10] In *Through the Looking Glass*, Tweedledee and Tweedledum read this poem to Alice where the title characters lure and eat all the oysters on the beach.
ANSWER: ***The Walrus and the Carpenter***

13. One portrait of this ruler by Hyacinthe Rigaud shows him in a blue robe and prominently features his muscular legs. For ten points each:
[10] Name this French king who had the Palace at Versailles expanded as his primary residence.
ANSWER: **Louis XIV**
[10] The primary architect of Louis XIV's expansions to Versailles was this man, who designed the Grand Trianon there. His uncle, also an architect, names a type of roof.
ANSWER: Jules Hardouin-**Mansart** (accept **Mansard roof**)
[10] The Gardens at Versailles also prominently feature an orchard for this fruit, designed by Hardouin-Mansart. They are also grown in the courtyard of the Great Mosque at Cordoba.
ANSWER: **orange**s

14. The first of these to be discovered was nicknamed LGM-1, for "little green men". For ten points each:
[10] Name this kind of rotating neutron star which emit radiation from their poles.
ANSWER: **pulsar**s

[10] In one class of pulsars, the beams gain their energy from the rotational energy of the pulsar. Pulsars and other neutron stars spin at high speeds due to this physical law.
ANSWER: **conservation** of **angular momentum**
[10] Accretion-powered pulsars emit X-rays and exist in this kind of stellar system. They obtain their energy from the gravitational potential energy of nearby matter.
ANSWER: **binary** stars

15. These can be classified as positive or negative sense, depending on how their genetic material is used. For ten points each:
[10] Identify these nucleic acids encased in protein capsids. They require a host cell to replicate their DNA, and are
ANSWER: **virus**es
[10] Not all viruses are bad, however. These viruses target bacteria and have been used in several important biological experiments as well as way to fight infection before the discovery of antibiotics.
ANSWER: **bacteriophage**s
[10] A closely studied class of viruses are these positive sense, single stranded RNA viruses that infect plants including tobacco. They are named for the mottled appearance they give infected leaves.
ANSWER: **mosaic virus**es (Accept **tobacco mosaic virus**es)

16. Julian Huxley popularized this term in 1957 essay. For ten points each:
[10] This philosophy advocates exceeding current biological boundaries in order to promote the long-term happiness and durability of humanity.
ANSWER: **Transhumanism**
[10] Many transhumanists believe that improvements in medication or the coming of the computational singularity will lead to this state of permanent life.
ANSWER: **immortality**
[10] This transhumanist wrote "Fantastic Voyage: Live Long Enough to Live Forever," in which he advocates for choosing a healthy lifestyle to be able to live long enough such that medical technology will advance enough in one year to extend life more than one year.
ANSWER: Ray **Kurzweil**

17. This territory was acquired at 3 cents per acre, totalling fifteen million dollars. For ten points each:
[10] Name this sale of a piece of that land by Napoleonic France to the fledgling United States, nearly doubling the size of the latter.
ANSWER: **Louisiana Purchase**
[10] Napoleon was willing to sell the Louisiana territory because of this conflict, which ended his ambitions of a North American empire and lost him his claims on Hispaniola.
ANSWER: **Haitian Revolution**
[10] This treaty ceded Florida to the United States and clarified the western boundary of the Louisiana Territory.
ANSWER: **Adams-Onís** Treaty

18. Followers of these religion celebrate Esbats in honor of the Moon Goddess . For ten points each:
[10] Name this largest neo-pagan religion which was inspired by the possibly fictional witch-cults of medieval England; practitioners of this faith invoke the five elements to consecrate magic circles.
ANSWER: **Wicca**
[10] This man was known as, "The Father of Wicca"; his book, "Witchcraft Today" explained that the belief in fairies in premodern Europe was due to the coexistence of humans with a secretive, diminutive civilization.
ANSWER: Gerald **Gardner** or **Scire**

[10] The Moon Goddess and this theriocephalic entity are jointly worshipped in most Wicca traditions, though, according to Gardner, they are both intermediaries between nature and a supreme deity, Dryghten.
ANSWER: Great **Horned God**

19. This country has very little arable land because it is mostly covered in grassy steppe. For ten points each:
[10] Name this country which has a low population density and a long border with China; it's capital is located at Ulaanbaatar.
ANSWER: **Mongolia**
[10] The Mongolian border with China is in this region, which receives very little rainfall as a result of the rain shadow of the Himalayas.
ANSWER: **Gobi** Desert
[10] This desert west of the Gobi was once bordered by the Silk Road. Some sources have translated its name as, "Go in, don't come out."
ANSWER: **Taklamakan** Desert

20. Pioneers in this form of theatre include Gelosi and Confidenti. For ten points each:
[10] Name this form of theatre which is characterized by improvised dialogue and extravagant characters found mainly in Italy.
ANSWER: **Commedia dell'Arte**
[10] This type of character was popularized by Tristano Martinelli where they pantomime their actions and work to thwart their master as servants. The Joker's lover is named and costumed as one of these.
ANSWER: **Harlequin**
[10] As part of the major four, this type of character in commedia dell'arte is characterized by greed and his high social standing.
ANSWER: **Pantaloon** (accept **Pantalone**)

EXTRA:

Many of these items are made of high-density polyethylene. For ten points each:
[10] To curb pollution from trash, Hawaii banned the distribution of these items at grocery stores.
ANSWER: **plastic bags** (accept any answer that indicates both plastic and bag)
[10] Removing plastic bags from a few tiny islands won't fix this concentrated area of oceanic trash, caused by an gyre in the world's largest ocean.
ANSWER: **Great Pacific Garbage Patch** or **Pacific Trash Vortex**
[10] Species higher up on the food chain will ingest more of any non-digestible as a percentage of their weight as a result of this process.
ANSWER: **Bio**logical **magnification** or **Bio**logical **amplification**