

## PRISON BOWL IX

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### Round 05

#### Tossups

1. He's not Oskar Pfister, but this thinker analyzed a hidden vulture in a Leonardo da Vinci work. Josef Breuer collaborated with this inventor of seduction theory, who discussed the image of white wolves in a tree. This man theorized that Jews practiced religion out of the guilt of murdering Moses. His work on cultural totems was later discredited, and he vividly described Irma's Injection in one of his books. This man's patients received pseudonyms like the Rat Man and Anna O, and he developed the distinctions between the id, ego, and superego. For 10 points, name this coiner of the "Oedipus complex," who pioneered psychoanalysis in *The Interpretation of Dreams*.

ANSWER: Sigmund **Freud** [accept Sigismund Schlomo **Freud**] <CL>

2. This character has a son with his step-mother at age nineteen, and later legally marries two other women, including The Third Princess. The half-brother of this character banishes him to Suma where he is entertained by a certain "Novice." After a Korean fortuneteller's warning, his father changes his name to remove him from the line of succession. The death of this character is implied by a blank chapter, "Vanished into the Clouds." For 10 points, name this title character of a novel written by lady-in-waiting Murasaki Shikibu in the 11th century, at the peak of Japan's Heian period.

ANSWER: Hikaru **Genji** [accept Shining **Genji**; Rokujō no **In**; Rokujo-**In**; **Minamoto**; **Minamoto no Tōru**; prompt on The **Shining Prince**] <CL>

3. ESPN basketball analyst Bill Raftery frequently yells this word after game-making shots, and a funky hit song by Booker T. & the M.G.'s is named after green ones of these vegetables. A *Steven Universe* character with this name shows Steven a video of him being born. In *Game of Thrones*, Shireen teaches a knight named after this vegetable to read. Shrek's wedding carriage is made from a giant one of these things, and earlier in the film, he analogizes his layered emotional state to one of these vegetables. The A.V. Club and clickhole.com are spinoffs of a website with this name. For 10 points, what vegetable names an online satirical news publication?

ANSWER: **onions** <AT/JK>

4. Intermediates in this process inhibit the degradation of hypoxia-inducible factors, or HIF. Mammals notably use GDP-forming succinate-CoA ligase to convert succinyl-CoA to succinate in this process. In this process, fumarate is hydrated to form malate, which is then oxidized into oxaloacetate. FAD is used as a prosthetic group in this pathway, which sees the reduction of NAD<sup>+</sup> to NADH and the conversion of acetyl-CoA into citrate during its first step. Occurring in the mitochondrial matrix for eukaryotes, for 10 points, name this process that follows glycolysis in aerobic respiration.

ANSWER: **Krebs cycle** (or **citric acid cycle**, **tricarboxylic acid cycle** or **TCA cycle**, prompt on aerobic **respiration**, do not prompt on or accept anaerobic respiration ) <AT>

5. The protection of Francisco Saavedra de Sangronis allowed reinforcements to enter this battle. Events in this battle included the scuttling of the HMS Guadeloupe and a skirmish involving Lauzun's Legion. In this battle, the redoubts 9 and 10 were captured. The Comte de Grasse ("comb de grawce") led naval forces in this battle, and the tune "The World Turn'd Upside Down" was allegedly played after its losing side lost. Prior to this battle, the Continental army marched from Newport, Rhode Island to its namesake Virginian town. For 10 points, name this 1781 battle where the Comte de Rochambeau ("comb de RO-sham-bo") and George Washington defeated Charles Cornwallis.

ANSWER: Battle of **Yorktown** (or Siege of **Yorktown**, accept Surrender at **Yorktown** or **German Battle**) <AT>

6. The Tully-Fisher relation uses a galaxy's rotation speed to determine this quantity. Type Ia supernovae are useful for calculating this quantity, as they have a constant absolute magnitude. Using trigonometry and positions of a star 6 months apart, one can find the parallax, the inverse of which is this quantity. The succession of these methods make up the cosmic ladder of this quantity. The AU, or astronomical unit, is a type of this quantity determined, with the orbit's period, through Kepler's Third Law. For 10 points, name this quantity that can be measured in parsecs or light years.

ANSWER: **distance** <JX>

7. A drunk in this work talks nonsensically about Aristotle, and another character wears an Elvis Presley mask. After being forced into “the chair of torture” by Dr. Branom, the protagonist is temporarily sheltered by F. Alexander after being beaten up by Billyboy and Dim. In this work, some characters enjoy a beverage spiked with a drug called “knives” at the Korova Milk Bar, and the protagonist is unable to enjoy Beethoven’s Ninth Symphony after undergoing the Ludovico technique. “Cancer” means “cigarette” in a secret language used by this book’s teen subculture, including the “droogs,” called Nadsat. For 10 points, name this dystopian novel featuring Alex, written by Anthony Burgess.

ANSWER: A Clockwork Orange <CL>

8. Note: two answers required. The log of one of these quantities is related to the other and constants denoted A, B, and C by the Antoine equation. The derivative of one of these quantities with respect to time equals latent heat over the other. The natural log of a ratio of one of these quantities is related to the difference in reciprocals of the other in the Clausius-Clapeyron equation, and their relationship was formulated by both Amontons and Gay Lussac. These two quantities will be constant if an equation is isobaric and isothermal. For 10 points, name these two linearly related quantities, which are measured in Pascals and degrees Celsius.

ANSWER: pressure and temperature <AT>

9. The Treaty of Mortefontaine was signed under this man’s government, and he levied the Direct Tax to finance six naval frigates, which spurred Fries’ Rebellion. A series of bills passed under this man included the Naturalization Act. After this man annulled a Model Treaty that he earlier created, the Quasi War ensued. During this man’s administration, Talleyrand refused to negotiate without taking bribes, leading to the XYZ affair. This signer of the Alien and Sedition Acts defended British soldiers in court after the Boston Massacre earlier in his long career. For 10 points, name this second President of the United States.

ANSWER: John Adams [do not accept “John Quincy Adams”] <AT>

10. A theme from this piece was salvaged from the earlier *messe solennelle*, which its composer claimed was destroyed. This work’s second movement uses a prominent harp duet to suggest a ball, and its last section contains a notable early use of col legno. An offstage oboe is paired with an English horn to convey a conversation between two shepherds in this piece. The fifth movement of this work parodies the Dies Irae hymn to portray a witches’ sabbath, while its “Reveries - Passions” section introduces an idée fixe representing love. “March to the Scaffold” is a movement from, for 10 points, which Hector Berlioz symphony likely composed under the influence of opium?

ANSWER: Symphonie Fantastique: Épisode de la vie d’un artiste... en cinq parties [accept Fantastical Symphony: An Episode in the Life of an Artist, in Five Parts or Berlioz’s Opus 14] <GA>

11. Okuninushi once slept in a room full of these creatures, which are typically depicted as white in Shinto mythology, and a princess who was to be sacrificed to one of these creatures was turned into a comb for safekeeping. Rainbow variants of these creatures are associated with the rain and the cycle of life in Aboriginal mythology. One of these creatures possessed a sword named “grass-cutter” in its fourth tail. Jormungandr is the Midgard type of these creatures, and a naga is one of these animals in Hindu mythology. For 10 points, name these animals which include vipers and pythons, a pair of which is featured on the caduceus.

ANSWER: snakes (accept serpents) <JK>

12. In a novel by this author, the district attorney asks what life was like, and Cross replies, “It was horrible.” In one of his short stories, Jim kills three boys he finds naked in a lake. One of his books is divided into the sections “Southern Night” and “The Horror and the Glory,” and he wrote the collection *Uncle Tom’s Children*. The protagonist of another of his books accidentally kills Mary with a pillow, and Boris Max explains that his client’s crimes were inevitable because of society’s expectations for black Americans. That client is Bigger Thomas. For 10 points, name this 20th century author and member of the Communist Party who wrote the autobiographical *Black Boy* as well as *Native Son*.

ANSWER: Richard Nathaniel Wright <CL>

13. It’s not Giordano Bruno, but according to Arthur Schopenhauer, this thinker’s “spiritual home” was “the banks of the Ganges.” This writer of “On the Rainbow” believed that everything in Nature was a part of a singular Reality, and he wrote *Treatise on the Improvement of Understanding*. The most famous work by this man includes the parts “Of Human Bondage” and “Of Human Freedom,” and is “demonstrated in geometrical order,” as it uses postulates and axioms to prove philosophical statements in the Euclidean method. According to widespread belief, this man equated God and the universe, making him a pantheist. For 10 points, identify this Swiss-Jewish author of *Ethics*.

ANSWER: Baruch Spinoza [accept Benedito de Espinosa; accept Benedict de Spinoza] <CL>

14. This man included a painting of a castle overlaying an identical window view in his work *The Promenades of Euclid*. This painter of a *The Human Condition* series depicted lone street lights in his *Empire of Lights* series, and painted a man looking into a gramophone in his *The Menaced Assassin*. In his painting *Golconda*, many men in bowler hats and trench coats rain from the sky. One of his self-portraits features an arm bending backwards at the elbow, and a green apple obscuring a man’s face. For 10 points, name this Belgian surrealist artist of *The Son of Man*.

ANSWER: Rene Magritte <AT>

15. The Schmidt number is a ratio of two rates involved in this process. When the size of this process's system is smaller than the mean free path of its particles, the Knudsen form of it occurs. This process is modeled by an equation that can be written as its namesake coefficient times the Laplacian of concentration, while another equation describing this process features the partial derivative of concentration with respect to position. Those two laws were derived by Adolf Fick. When this process occurs across a semipermeable membrane, it is known as osmosis. For 10 points, name this process where molecules move from areas of higher to lower concentration.

ANSWER: diffusion (prompt on osmosis before mention) <AT>

16. The Orsini and Colonna families carried out an infamous feud in this city. Rulers of this city wore the Ring of the Fisherman as part of their official regalia. Normans under Robert of Guiscard ("geese-CARD") sacked this city in 1084 during the Investiture Controversy. The Gesù ("jeh-ZOO") was located in this city, which was sacked by the Landsknechts ("LANDS-cuh-nesht") in 1527. The Lateran Treaties solved this city's namesake question. This city was the capital of the Papal States. This city succeeded Florence as the capital of a kingdom formed in 1870, which Pope Pius IX fled. For 10 points, name this city around Vatican City, the capital of Italy.

ANSWER: Rome <AT>

17. This man dyed his hair blonde and took on a German accent to play a Nazi lieutenant in *The Young Lions*. His directorial debut took twice as much money and time to film as was budgeted; that film was the western *One-Eyed Jacks*. This man took on the musical role of Sky Masterson in *Guys and Dolls*, and he popularized the T-shirt in a role where he repeatedly yelled "Stella!" up a staircase. That role was Stanley Kowalski in *A Streetcar Named Desire*. In his most famous role, this man told Johnny Fontane that he's gonna make another character an "offer he can't refuse." For ten points, name this actor who played Vito Corleone in *The Godfather*.

ANSWER: Marlon Brando, Jr. <AG/AT>

18. David Macht attempted to assess the scientific validity of this practice by measuring the growth rate of lupin seedlings. This process is mediated by a mashgiach, and items used in it can be prepared via pareve. This tradition can be adhered to through a process involving a shochet known as shechita ("sheh-khee-tah"), while entities against this practice are known as *treif*, or "torn." It is governed by the "foreleg, cheeks and maw" commandment, and dictates that meat and dairy cannot be mixed. For 10 points, name this Jewish practice that prohibits the consumption of certain animals and animal parts.

ANSWER: keeping kosher (or kashrut, accept other clear knowledge equivalents, do not accept non-specific stuff like "fasting" or "not eating") <GA>

19. In one novel, this character performs a magic show where he makes money fall from the ceiling of the Variety Theatre. In another work, this character is described as having three faces and being frozen in ice, and the author of that work writes, "Were he as fair once, as he now is foul." Baudelaire said this character "soften[s] magically the old bones" and called this character the "Prince of Exile" in a poem titled "The Litanies" of this character. Mammon helps this character organize support in Pandemonium in John Milton's *Paradise Lost*. For 10 points, name this Biblical character found in the city of Dis in Dante's *Inferno*, typically portrayed as a fallen angel and the ruler of Hell.

ANSWER: Satan [accept the Devil or Lucifer; accept Woland before "In another work"] <CC>

20. The "Cultural Policy" of 1919 and the March First Movement occurred in this region. One country in this region believes in the Tangun myth. Most baekjeong ("bake-JONG") are from this region, and its nobility were called yangban. The Treaty of Shimonoseki made this area a colony, and it later supplied many Japanese "comfort women". Most Mongol ships destroyed by the "kamikaze" were from this region, and Toyotomi Hideyoshi invaded this peninsula in 1592. The "hermit kingdom" of this peninsula was its Joseon ("JOE-sun") dynasty. For 10 points, name this peninsula containing Pyongyang and Seoul ("sole").

ANSWER: Korean peninsula (accept "South Korea" until "One country" is read)

TB. This composer emphasized the soprano and bass lines in his *Quinto Libro* (KEEN-toe LEE-bro), which was at the heart of a feud with Giovanni Artusi. In one work by this composer, triple meter is used to show the language of love. That work is *The Coronation of Poppea*. Another work of that genre by this composer used harpsichord, strings, harp, and recorders to show the world of Thrace, contrasted with the brass in the Underworld. That work was the first in its genre of opera. For 10 points, name this Italian composer who marked the beginning of the Baroque period and wrote *L'Orfeo*.

ANSWER: Claudio (Giovanni Antonio) Monteverdi <CL>

## Bonuses

1. Richard Feynman famously invalidated this thought experiment by stating that its namesake device's pawl will also undergo Brownian motion. For 10 points:

[10] Name this hypothetical perpetual motion machine. It consisted of a paddle wheel which would be turned by fluctuations of heat in a system at thermal equilibrium.

ANSWER: **Brownian ratchet** (accept **Feynman-Smoluchowski ratchet**)

[10] This other thought experiment also attempted to extract "free work" from a system. It involved segregating the fast molecules of a container-bound gas in a separate chamber, decreasing the original container's entropy.

ANSWER: **Maxwell's demon**

[10] Maxwell's demon and the Brownian ratchet are both ultimately impossible because of this law, which states that the entropy of the universe will always increase.

ANSWER: **second law of thermodynamics** (accept clear knowledge equivalents) <AT>

2. Environmental groups in this state recently sued the US Forest Service for allowing the Nestle Corporation to draw hundreds of millions of gallons of water from Strawberry Creek. For 10 points each:

[10] Name this state, whose governor in 2014 issued executive order B-29-15, which aims to reduce water usage in this state by 25 percent in response to a severe and ongoing drought.

ANSWER: **California**

[10] Executive order B-29-15 was issued by this current governor of California. He also served as governor from 1975 to 1983.

ANSWER: Jerry **Brown** (accept Gerald **Brown** or Edmund Gerald **Brown** Jr.)

[10] The Californian drought has been somewhat lessened by a strong version of this Pacific-wide weather pattern that accompanies a band of warm ocean water. It is also thought to have partially caused forest fires and subsequent haze in Indonesia.

ANSWER: **El Niño** [prompt on **El Niño Southern Oscillation** or **ENSO**]

<GA/CC>

3. The Battle of Blood River was a victory for this ethnic group. For 10 points each:

[10] Name this group that migrated out of the Cape in the Great Trek, founding Transvaal and the Orange Free State. Their name comes from the word for "farmer" in Dutch and Afrikaans.

ANSWER: **Boers** (prompt on "Afrikaner")

[10] A lot of this material was found in 1886 at Witwatersrand in the Transvaal. The Anglo-American Corporation was founded to mine this substance, whose foreign miners had to wait 14 years to vote.

ANSWER: **gold** (accept **Au**)

[10] This people, whose last king was Cetshwayo, fought the Boers at Blood River. They later fought the British at the battles of Isandlwana and Rorke's Drift.

ANSWER: **Zulu**

4. According to the title character of this novel, "Those who don't understand their Personal Legends will fail to comprehend its teachings." For 10 points each:

[10] Name this allegorical novel by Paulo Coelho about an Andalusian shepherd named Santiago who travels through Egypt and meets the title character in an oasis named al-Fayoum. It holds the Guinness record for most-translated book by a living author.

ANSWER: ***The Alchemist***

[10] *The Alchemist* is written in this language. Other authors who have written in this language include Fernando Pessoa, who lived in Lisbon.

ANSWER: **Portuguese**

[10] This writer wrote another work called *The Alchemist*. This man's work of that name, a play, features Captain Face, who asks the audience for forgiveness, and the gentleman Lovewit.

ANSWER: **Benjamin "Ben" Jonson** [prompt on **Jonson**] <CC>

5. Drat! Your compiler has just told you that it detected an error in your program. What could it be? For 10 points each:

[10] Perhaps your quotients produced by integer division are being rounded down to the nearest integer. In that case, you'd have to divide using this 32-bit data type. A double is the double-precision form of this data type.

ANSWER: **float** <AT>

[10] Or maybe, if you're coding in Java or C, you simply forgot to add one of these characters to the end of a statement. In most programming languages, this character is found at the end of all statements.

ANSWER: **semicolon**

[10] These programming error conditions may be handled or ignored by the runtime system. The "unchecked" form of these entities are also known as run-time errors, while the "IO" type is implemented when an input or output operation fails.

ANSWER: **exceptions** (or **exceptional events**) <AT>

6. Acts affecting this action created an Asiatic Barred Zone, set literacy tests, applied the “one-drop rule”, and set quotas. For 10 points each:

[10] Name this action addressed by acts from the early 1900s. Nativist and Know-Nothing groups opposed policies concerning this action, and a 1918 act affecting it expanded on the Anarchist Exclusion Act.

ANSWER: **immigration** (accept word forms)

[10] This ethnicity was targeted by a namesake Exclusion Act in 1882, but many already lived in San Francisco in “bachelor societies.”

ANSWER: **Chinese** or **Han** (accept **Chinese** people)

[10] An immigration station on this island processed over a million Asian immigrants in the 20th century, the majority of them Chinese. Earlier, it had been known as Fort McDowell.

ANSWER: **Angel** Island <RN/CL>

7. Before Eminem and Rihanna; before Wiz Khalifa and Charlie Puth, there were these guys. For 10 points each, answer these questions about classical music that was written in collaboration.

[10] This Romantic composer produced many pieces of “light music” with his brothers Josef and Eduard, like the *Pizzicato Polka*. A drunken Falke dresses like a bat and is ridiculed in this man’s opera *Die Fledermaus*.

ANSWER: **Johann Strauss II** (or **Johann Strauss Jr.**, prompt on **Strauss**, do not accept or prompt on “Richard Strauss”)

[10] Joaquín Valverde and Federico Chueca, both composers from this country, wrote several zarzuelas together including *La gran vía*. Lennox Berkeley later collaborated with Benjamin Britten to write *Mont Juic*, a suite of Catalan dances named after a hill in this country.

ANSWER: **Spain**

[10] Alexander Glazunov and Nikolai Rimsky-Korsakov worked together to orchestrate *Songs and Dances of Death*, a song cycle originally by this man. A series of works by him includes movements depicting cattle pulling a cart and an “Old Castle.”

ANSWER: Modest **Mussorgsky** (or Modest Petrovich **Mussorgsky**) <GA>

8. The main character of this show, played by Gina Rodriguez, wants to launch a career in romance novels after she gets her teaching degree, but things don’t always go according to plan. For 10 points each:

[10] Name this show about a woman who is accidentally inseminated with the sperm of a young Miami hotelier named Rafael by his lesbian sister.

ANSWER: ***Jane the Virgin***

[10] *Jane the Virgin* incorporates aspects of this genre of limited-run T.V. drama. Originating in Spanish-speaking countries, shows in this genre are distinct from soap operas in that they rarely air for more than a year.

ANSWER: **telenovelas**

[10] *Jane the Virgin* premiered in the 2014-15 season on this television network, which also airs shows like *Arrow* and *The Flash*. Shows about the occult on this channel include *Supernatural* and *The Vampire Diaries*.

ANSWER: The **CW** Television Network <CL>

9. This equation features a pre-exponential factor symbolized A, which is dependent on the frequency of collisions between reactant molecules. For 10 points:

[10] Name this equation named for a Swedish chemist, which relates the rate constant of a chemical reaction to the reaction’s activation energy and absolute temperature.

ANSWER: **Arrhenius** equation

[10] The units of the Arrhenius equation’s pre-exponential factor are influenced by this quantity, which is zero for a reaction whose rate does not depend on the concentration of reactants.

ANSWER: **order** of reaction (or reaction **order**)

[10] For a first order reaction, this function of the rate constant is plotted on the y-axis, against one over T.

ANSWER: **natural log** of k (accept **ln** k) <AT/JK>

10. After their birth, these two figures stirred the primeval ocean with a jeweled spear, creating the archipelago of Japan in the process. For 10 points:

[10] Name either of these two male and female Japanese deities, the creators of the *kami*. One of them died after giving birth to Kagutsuchi, the god of fire, and was sent to Yomi, the underworld.

ANSWER: **Izanagi** and **Izanami** (accept both answers if given)

[10] After Izanami’s death, Izanagi cut Kagutsuchi into eight pieces in grief, creating these formations. The forge of Vulcan was allegedly located under one of these objects named Mount Etna.

ANSWER: **volcanoes**

[10] Another myth involving volcanoes concerns this goddess of fire, who created the Hawaiian Islands after her sister, the water goddess Na-maka-o-kaha’i, chased her away for seducing her husband.

ANSWER: **Pele** <JK>

11. The Combination Acts of 1800 were repealed in 1825, allowing these institutions to exist. For 10 points each:

[10] Name this type of institution promoted by socialist Robert Owen, which has “trade”, “craft”, and “labor” types, and which succeeded the medieval guild.

ANSWER: unions

[10] This non-Luddite group of workingmen included Feargus (“FAIR-gus”) O’Connor and was formed after the Reform Act of 1832. It had Six Demands in a namesake “People’s” document.

ANSWER: Chartists or Chartism

[10] The Chartists opposed this Church, which holds Lambeth Conferences every 10 years and has a Book of Common Prayer.

ANSWER: Anglican Church or Church of England

12. The protagonist of this book famously said, “Please, sir, I want some more.” Just like how you all want more points! For 10 points each:

[10] Identify this Charles Dickens book about the title boy, who joins the Artful Dodger and a group of pickpockets. Another major plot point is Bill Sikes’ murder of Nancy.

ANSWER: Oliver Twist [accept Oliver Twist; or, the Parish Boy’s Progress; prompt on The Parish Boy’s Progress by itself; do not accept or prompt on “Oliver!”]

[10] The Artful Dodger and Oliver work for this man, known sometimes as “the Jew.” He frequently refers to people as “my dear,” and he intentionally lies to Sikes to get him to kill Nancy. At the end of the book he is sentenced to death.

ANSWER: Fagin

[10] This character turns out to be Oliver’s maternal aunt, and he ends up living with her, even though initially he was supposed to rob her.

ANSWER: Miss Rose Maylie [prompt on Maylie] <CL>

13. These two bodies of water are considered to be one mega-lake by most geologists, as they are not separated by a river. For 10 points each:

[10] Name these two Great Lakes that surround the southern peninsula of Michigan.

ANSWER: Lake Michigan and Lake Huron

[10] Michigan and Huron are connected by this waterway. It separates the Upper and Lower Peninsulas of Michigan, and it contains the island of Bois Blanc.

ANSWER: Straits of Mackinac (“MACK-i-naw”)

[10] This city’s name comes from the French word for “strait”, indicating its location on one of the rivers that connects Huron with Erie. This Michigan city’s Ambassador Bridge is a few miles downstream of Lake St. Clair.

ANSWER: Detroit <GA>

14. This author was a co-founder of the Group 47, a literary association in Germany following the Second World War. For 10 points each,

[10] Name this author of *Crabwalk*, a novel which features the sinking of the German ship *Wilhelm Gustloff*. He is most famous for his novel *The Tin Drum*.

ANSWER: Gunter Grass

[10] Grass wrote this series of novels about his hometown. It is named after a city now administered by Poland, and it contains the works *Dog Years*, *Cat and Mouse*, and the aforementioned *The Tin Drum*.

ANSWER: Danzig Trilogy

[10] This 2006 autobiography of Grass’ is a part of the memoir trilogy, and it created significant controversy when Grass publicly confessed that he had been a member of the Waffen-SS during the Second World War.

ANSWER: Peeling the Onion <LT>

15. Crak! Pow! Whoosh! Name things about a certain pop artist, for 10 points each:

[10] Many of this 20th century American artist’s works were inspired by comic strips. This artist of *Drowning Girl* used the title phrase to portray a plane crash in his *Whaam!*.

ANSWER: Roy Fox Lichtenstein

[10] In Lichtenstein’s *Drowning Girl*, the title blue-haired woman is shown thinking, “I’d rather sink -- than call” this man “for help.” In another Lichtenstein work, a blonde in a blue dress thinks that she knows how this man “must feel.”

ANSWER: Brad

[10] Many of Roy Lichtenstein’s works were colored using these entities, often used by pulp comic book artists. They are layered cyan, magenta, yellow, and black circles of uniform size and distribution.

ANSWER: Ben-Day dots (prompt on partial) <CL>

16. These molecules consist of an amine group, a carboxylic acid group, and a variable side-chain. For 10 points:

[10] Name these molecules that are linked together via peptide bonds to form proteins. There are 20 common types of them, which can be classified as polar, nonpolar, basic, and acidic.

ANSWER: **amino acids**

[10] Linear chains of amino acids can then fold into these secondary protein structures, which are contrasted with the alpha helix. These structures commonly exhibit the hairpin and Greek key motifs.

ANSWER: **beta sheets** (accept **beta-pleated sheets**)

[10] 3D images of protein structures are frequently obtained by this process, where finely focused waves are directed at specimens. The ways in which those waves are diffracted helps determine the electron density of the sample.

ANSWER: **X-ray crystallography** <AT>

17. Moses may be famous for receiving the command to lead the Jews to the land of milk and honey, but how much do you know about his honeys? Answer some questions about the women in Moses' life, for 10 points each:

[10] This woman was given Moses's hand in marriage by her father Jethro, a priest of the Midians. She was the mother of Moses' sons Gershom and Eliezer.

ANSWER: **Zipporah** [or **Sephora**]

[10] The Israelites were led through the parted Red Sea by this sister of Moses. She also hid him in a basket when he was a baby to protect him from being killed.

ANSWER: **Miriam**

[10] Moses first meets both Miriam and Zipporah in this book of the Bible, in which Moses receives the Ten Commandments on Mount Sinai. It's the second book of both the Torah and the Old Testament.

ANSWER: The Book of **Exodus** [accept **Sh'mot**] <GA>

18. Audiences are led through the world of this play by the Stage Manager. For 10 points each:

[10] Identify this play by Thornton Wilder which is set in Grover's Corners. Its three acts are "Daily Life," "Love and Marriage," and "Death and Dying," and it follows the life and romance of Emily Webb and George Gibbs.

ANSWER: **Our Town**

[10] In Act II of *Our Town*, Emily confronts George about his pride over two of these drinks. George buys these strawberry-flavored drinks before confessing his love, but doesn't have the money to pay Mr. Morgan for them.

ANSWER: **ice cream sodas** [be very generous and accept partial answers except "ice" alone]

[10] The Stage Manager adopts the role of Mr. Morgan, but at many other points in the play, does this thing, a literary device used in plays in which a character directly addresses the audience.

ANSWER: **breaking the fourth wall** [accept word forms; prompt on descriptions; prompt on partial] <CL>

19. "Boy, boy, crazy boy, get cool, boy!" While you answer this bonus. For 10 points each:

[10] Heavily inspired by Romeo and Juliet, this musical centers on Tony and Maria, who profess their love for each other in "Tonight." A character from this musical sings about feeling "pretty and witty and bright" in "I Feel Pretty."

ANSWER: **West Side Story**

[10] This composer and co-writer of *West Side Story* conducted the *New York Philharmonic* while the musical toured. He was also known for his *Young People's Concerts*.

ANSWER: Leonard **Bernstein**

[10] The popular Overture to this Bernstein operetta is often performed on its own. A soprano in this work sings about "the part I play" in the coloratura aria "Glitter and Be Gay."

ANSWER: **Candide** <CL>

20. This ethnicity had several dynasties including the Cholas, Pandyas, and Cheras. For 10 points each:

[10] Name this Dravidian ethnic group that speaks a namesake language in South Asia. Their namesake "Tigers" are also called the LTTE.

ANSWER: **Tamils**

[10] Tamils are a minority on this island nation south of India. Its largest city is Colombo, and it was a British colony called Ceylon until 1948.

ANSWER: **Sri Lanka**

[10] Note: two answers required. Before the British took over, these two empires controlled Sri Lanka, with one ultimately evicting the other after a war named after both nations. They also fought over Singapore and Brazil and shared the port of Dejima in Japan.

ANSWER: **Portugal** (or the **Portuguese**) and the **Netherlands** (or the **Dutch**); both answers required

TB. The phrase "no peace beyond the line" applied to exploration in and beyond this ocean. For 10 points each:

[10] Name this ocean, which the Treaty of Tordesillas drew a line through. One ship to cross this ocean was Leif Erikson's longboat called *Skidbladner*.

ANSWER: **Atlantic** Ocean

[10] This French explorer sailed across the Atlantic, down the St. Lawrence River, named Canada, and founded Montreal while looking for the Kingdom of Saguenay ("SA-gay-nay"), but only found quartz and iron pyrite.

ANSWER: Jacques **Cartier**

[10] This colony, owned by the One Hundred Associates, was claimed after Verrazano, Cartier, and Champlain voyaged down the St. Lawrence and into Canada.

ANSWER: **New France**