

Prison Bowl VII

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Round 12 – Tossups

1. One writer in this language calls Roosevelt “Alexander-Nebuchadnezzar” for believing “progress” to be an invasion. This language was used to write the Rural Trilogy, which includes a play where Leonardo Felix and the Groom get into a knife fight, and another play dominated by a matriarch who commands “Silence!”. Chrysostom dies of a broken heart over the shepherdess Marcela in a novel in this language. That novel’s protagonist rides Rocinante in a deluded quest after Dulcinea, and promises governance of an island to Sancho Panza. For 10 points, name this language used by Miguel de Cervantes to write *Don Quixote*.

ANSWER: **Spanish** [or **Español**] <KX>

2. This god’s head and genitals were depicted on his eponymous quadrangular pillars, which were used as boundary markers, and placed outside gymnasia and houses. Worshipped as an Arcadian fertility god, he was born on Mount Cyllene to the eldest of the Pleiades and crafted a tortoiseshell into a lyre after stealing Apollo’s cattle. An epithet of this son of Maia refers to how he lulled to sleep and slew the giant Argos. This psychopomp told Calypso to set his great-grandson Odysseus free, and gave Odysseus moly to resist Circe. His symbols include winged sandals, winged cap, and caduceus. For 10 points, name this Greek god of travelers and thieves, the herald of the gods.

ANSWER: **Hermes** [accept **Hermes** Argeiphontes; do not accept “Mercury”] <MZ>

3. One proof of this theorem uses Liouville’s theorem, that any bounded function differentiable on the complex plane is constant. An attempt to prove this theorem by d’Alembert was incomplete, and it was eventually proven by Gauss. It implies that every algebraic extension of the real numbers is isomorphic to the field of either real or complex numbers. In 1806 Argand stated this theorem for complex coefficients. A corollary of this theorem is that the field of complex numbers is closed. For 10 points, name this theorem that states that a polynomial of degree n has n roots in the complex plane.

ANSWER: **fundamental theorem of algebra** <BM>

4. A nude man balances a woman atop his arm in this artist’s *Two Acrobats*, and four performers swing on a wire above a large ring in his *Circus Scene*. Another work by this man features twin protruding arches and is painted his signature “red;” that work is his *Flamingo*. This artist also created a pyramidal sculpture with six prongs that dig into the ground and peaks that end in disks, his *Man*, but he is best known for a number of works with weights suspended by wire and string. For 10 points, name this sculptor of *Lobster Trap and Fish Tail* and developer of stables and mobiles.

ANSWER: Alexander **Calder** <SoH>

5. This man proposed a labor theory of value in a work proposing a paper currency and was a member of the Secret Committee of Correspondence. He obtained documents exchanged between two Massachusetts politicians and gave them to Samuel Adams, starting the Hutchinson Letter Affair. He served on the Committee of Five and indirectly prompted Louis XVI to sign the Edict of Versailles while an ambassador. He drew political cartoons, one of which featured the words “Join or Die” above a snake cut into eight parts. For 10 points, name this man, who, under the pseudonym of Poor Richard, printed an almanac, and allegedly flew a kite in a thunderstorm.

ANSWER: Benjamin **Franklin** <AM/RN>

6. One part of this poem is a “litany of affirmation of the Lamb in its glory,” according to its author in *Deliberate Prose*. Its narrator’s peers release an “eli eli lamma lamma sabacthani saxaphone cry” and throw “potato salad” at “CCNY lecturers on Dadaism.” Addressing a friend stuck in the “total animal soup of time” and condemning “Moloch whose mind is pure machinery,” this poem’s narrator assures Carl Solomon, “I’m with you in Rockland.” Its narrator identifies with “angelheaded hipsters burning for the ancient heavenly connection.” For 10 points, name this Beat poem opening “I saw the best minds of my generation destroyed by madness,” written by Allen Ginsberg.
ANSWER: **“Howl”** <SC/KX>

7. On October 15, 2013, the Supreme Court heard arguments from John J. Burch and Mark Rosenbaum for a case about this policy. The Supreme Court found that it does not amount to a quota system, and is therefore constitutional. A concurrence written for a case regarding this policy claimed it would be unnecessary in 20 years in *Grutter v. Bollinger*. Race was cited as “a factor of a factor of a factor” in a dissenting opinion regarding this policy. Justice Ginsburg argued that race-blind admission would not be a suitable replacement for this in *Fisher v. University of Texas*. For 10 points, name this policy favoring a group suffering from discrimination.
ANSWER: **affirmative action** <SC>

8. These compounds can be synthesized from prochiral allylic alcohols in the Sharpless reaction. One reaction involving displacement of alkyl halides by alkoxide ions synthesizes the “crown” type of these compounds. They have 110 degree bond angles that result in a dipole, and oxidation of alkenes can produce ones with three-membered rings called epoxides. Glycosidic linkages are composed of these compounds. For 10 points, name these compounds characterized by two R groups bonded to an oxygen atom, whose diethyl type is used as an anaesthetic.
ANSWER: **ethers** <BM>

9. This man charted the "New Course" by following *Weltpolitik*, and the Agadir crisis followed from his deployment of the *SMS Panther*. This man suffered a major diplomatic embarrassment after sending a congratulatory letter to Paul Kruger and accusing Russia and France of attempting to draw his nation into the Boer War. In addition to the Daily Telegraph Affair, this man was also featured “dropping the pilot,” in a Punch cartoon, referring to his dismissal of German Chancellor Otto von Bismarck. For 10 points, name this last German Kaiser who abdicated following Germany’s defeat in World War I.
ANSWER: **Wilhelm II** [or **William II**] <JL>

10. In one opera by this composer set in Stockholm, the fortune-teller Ulrica prophesizes that Riccardo will be killed by the next man who shakes his hand. This composer of *A Masked Ball* included “Va, pensiero,” or the Chorus of the Hebrew Slaves, in an opera which details the exile of the Jews from Babylon, *Nabucco*. In addition to the drinking song “Libiamo ne’ lieti calici” in an opera about Alfredo and Violetta, this composer wrote an opera which sees the Duke of Mantua sing “La donna è mobile” and another opera about an Egyptian princess. For 10 points, name this Italian composer of *Rigoletto*, *La traviata*, and *Aida*.
ANSWER: Giuseppe **Verdi** <BM>

11. The *calmecac* saw nobles of this culture educated in astronomy and religious duties. Orange-and-black Cholula polychrome pottery was imported to this civilization’s capital. *Pochteca* traders here also served as executive spies. These people traded in copper axes and cacao beans in Tlatelolco, their principal marketplace. The *calpolli* was the basic kinship unit of this culture, and they built twin pyramids and wide causeways in their island capital. These people grew crops on *chinampas*, or floating gardens. For 10 points, name this Mesoamerican culture that made their capital, Tenochtitlan, in the Valley of Mexico.
ANSWER: **Aztecs** <RN>

12. Addressed to “gracious ladies” in lovesick suffering, this work frequently features hand-holding to sing and dance the *carola*. One character in this book is tricked into a barrel so Peronella can resume her affair. Another character pretends to marry a twelve-year old girl after putting two children to death and exiling his wife in this book. However, all that is revealed to be a ruse by Gualtieri to test Griselda’s loyalty. This book centers around a group of aristocratic Florentines who travel to the countryside to flee the Black Plague. For 10 points, name this book by Giovanni Boccaccio containing one hundred tales told over ten days.

ANSWER: The Decameron [or The Book of Prince Galehaut; or Decamerone di Giovanni Boccaccio: *Cognominato Principe Galeotto*] <MZ>

13. The western border of the 1660 Castello plan is this structure. The Buttonwood Agreement was signed here, and a man living here wrote the *Customers' Afternoon Letter*, which became a journal named for this location. William Remick paused operations here following one incident. Celestino Madeiros confessed to a crime here, but that did not save suspected immigrants. Its ramparts were built to exclude the Lenape from New Amsterdam. This site was home to the first US Capitol building, Federal Hall, and the New York Stock Exchange. For 10 points, name this street home to the first Occupy movement and synonymous with New York City’s financial district.

ANSWER: Wall Street <JL/RN>

14. The volley principle and phase locking are phenomena involved in this perception. Two opposing theories of this sense focus on location and frequency of neuronal response, respectively; the latter is the place code. The round and oval windows are involved in transmitting and transducing its stimuli. This sense uses the precedence effect and detects time differences to conduct scene analysis and localization. This sense is primarily processed in the temporal lobe, and stimuli of this sense is transduced by the organ of Corti, amplified by the ossicles, and transmitted by the tympanic membrane’s vibrations. For 10 points, name this sense that perceives sound using the ears.

ANSWER: hearing [or audition] <MZ>

15. One culture sees this ritual as liberating the *istli* and uniting it with the Sun. A Hialeah, Florida law effectively prohibiting this type of rite was struck down in 1993, permitting Santeria to be practiced there. As the fire god and the messenger god, Agni received these. Maimonides and Nachmanides disagreed about whether these were necessary in Judaism, with Maimonides arguing that it was performed to fit in with local tribes. Two kinds of this action in Ancient Greece were the Hecatomb, which used 100 bulls, and the Holocaust, which is completely burned. For 10 points, name this ritual, called *libation* for liquids, which offers animals or materials to please a god.

ANSWER: sacrifice <MAG/RN>

16. In this play, Ezra Wannafeller pays a character whom he is told is Britain’s most “original moralist” to give lectures on morality. In its first act, a notetaker in Convent Garden is accused of being a policeman. Mrs. Pearce dresses this play’s main female character in a blue kimono, while that character’s father, Alfred, asks for money downstairs. Freddy Hill is taken with the main character’s way of speaking and eventually marries her. In this play’s second act, Colonel Pickering, a “student of Indian dialects,” makes a wager with a phonetics professor about a Cockney flower girl. For 10 points, name this play where Henry Higgins attempts to reform Eliza Doolittle, by George Bernard Shaw.

ANSWER: Pygmalion <PS>

17. This man used RackNine to change voting locations but denied broad allegations of fraud in the Robocall scandal. This man prorogued Parliament twice and failed to break a monopoly on barley by his nation’s Wheat Board. He announced an army training site on Resolute Bay and a deep-sea port to secure his nation’s claims on the Northwest Passage in Nunavut in 2007. Michael Ignatieff led the Liberal Party opposition to this man. Paul Martin was succeeded in his highest post by this man in 2006. This member of the Conservative Party passed the Quebecois-nation motion. For 10 points, name this current Prime Minister of Canada.

ANSWER: Stephen Harper <RN/JL>

18. Alexander Scriabin's only work of this type features a lyrical clarinet solo in its second movement and is in F-sharp minor. Johannes Brahms notably wrote two works of this type, while one by Beethoven begins with the orchestra playing an E-flat major chord followed by a flourish on the namesake instrument. Tchaikovsky's first one of these begins with the French horn playing a descending B-flat minor motif, while one by Rachmaninoff starts with modulating F minor chords interspersed with low Fs to evoke bells. Rachmaninoff's 2nd and Beethoven's "Emperor" are, for 10 points, this type of work featuring a certain keyed instrument with orchestra accompaniment.
ANSWER: piano concerto [prompt on concerto] <BM>

19. The second of Aquinas' five ways illustrates the lack of God, who according to Aquinas, is the "first efficient" one of these factors. Since not everyone with CFTR mutations gets cystic fibrosis, CFTR mutations are necessary but not sufficient ones. Aristotle differentiated these factors into material, formal, efficient, and final ones. For an acorn, Aristotle's final one, or *telos*, would be an oak tree. Regularity analysis determines these factors using two constantly conjoined events, from which we habitually induct these according to David Hume. For 10 points, effects result from what factors that cannot be solely established by correlation?
ANSWER: causes [accept causality] <RN>

20. This man built a device involving a wire that rotates around a magnet in a pool of mercury, the first homopolar motor, but failed to credit the assistance of his mentor, Humphry Davy. This scientist formulated two laws of electrolysis and demonstrated that an electric charge in a conducting shell induces an equal charge on the shell in his ice pail experiment. His namesake law states that the induced electromotive force in a closed circuit is equal to the negative time rate of change of the magnetic flux in the circuit. That law is the third of Maxwell's equations. He is the inventor of the dynamo and the namesake of a conductive "cage". For 10 points, name this discoverer of inductance.
ANSWER: Michael Faraday <AT>

TB. An expository work written in this language that dedicates a chapter to the "gestures of the minor limbs" is *Scripture of Dance*. One character depicted in this language was selected to marry a princess based on his ability to wield and break a divine bow, and later enlists the aid of a monkey king. That work in this language is an epic poem attributed to a figure called the "first poet" of this language, Valmiki, and that work deals with the rescue of Sita from the Rakshasa king Ravana. Magha and Kalidasa wrote in this language. For 10 points, name this Classical Indian language of the *Mahabharata* and the *Ramayana*.
ANSWER: Sanskrit <ZP>

Round 12 – Bonuses

1. This man wrote the First and Second Reports on Public Credit to advocate for his financial plan. For 10 points each:

[10] Name this Founding Father and first Secretary of the Treasury who advocated for the creation of the Bank of the United States.

ANSWER: Alexander **Hamilton**

[10] Hamilton, along with John Jay and James Madison, anonymously wrote this series of essays promoting the ratification of the US Constitution.

ANSWER: **Federalist Papers**

[10] In 1786, Hamilton organized this Maryland convention attempting to “Remedy Defects of the Federal Government”. Only five states were represented here, so a call for a 1787 convention in Philadelphia was issued.

ANSWER: **Annapolis** Convention <JL/RN>

2. A blind beggar sings as the title character of this novel dies in agony by arsenic poisoning. For 10 points each:

[10] Name this novel written in free indirect style about Emma, who has affairs with Leon and Rodolphe out of boredom of her marriage with Charles.

ANSWER: **Madame Bovary**

[10] *Madame Bovary* is the debut novel of this French realist writer whose ambition was to write “a book about nothing”. Julian Barnes wrote a novel titled after his parrot, featured in this author’s “A Simple Heart”.

ANSWER: Gustave **Flaubert**

[10] In *Madame Bovary*, Emma loses faith in Charles after Charles bungles a minor operation on this character’s club-foot that ends in amputation. His leg’s infection foreshadows Emma’s demise.

ANSWER: **Hippolyte** <BM>

3. Answer these questions about places related to observational astronomy, for 10 points each.

[10] Thuban was one of these kinds of stars for ancient Egyptians before it was superseded in 1793 BCE by Kappa Draconis. Because of Earth’s axial precession, they should repeat every 26,000 years, ignoring proper motion.

ANSWER: northern **pole star** [accept **north star**; do not accept “Polaris”]

[10] Using a 40-foot-long telescope, Sir William Herschel discovered this planet’s moons Enceladus and Mimas, in addition to the planet Uranus.

ANSWER: **Saturn**

[10] This US state is the location of the Large Binocular Telescope, as well as the VERITAS gamma-ray telescope and the Lowell Observatory in Flagstaff.

ANSWER: **Arizona** <ZP>

4. An argument of this type observes a complexity in nature, behind which there must be an intelligent purpose. For 10 points each:

[10] Identify this family of arguments including the teleological and cosmological types. The ontological type of this argument starts with the basis that its conclusion is more perfect than the contrary.

ANSWER: arguments for the **existence** of **God**

[10] This British philosopher attacked a number of arguments for the existence of God in *Why Am I Not a Christian*. With Alfred Whitehead, he attempted to break down all mathematics to logic in *Principia Mathematica*.

ANSWER: Bertrand **Russell**

[10] Russell used this object as an analogy for the approach requisite to prove God’s existence. By imagining it revolving around the Sun, Russell argued that the burden of proof rests on the one making the unfalsifiable claim.

ANSWER: Russell’s **teapot** <JL/MZ>

5. His powerful oratory is attributed to his sympathy with the sinful nature of mankind. For 10 points each:

[10] Name this preacher targeted by Roger Chillingworth for his passionate affair with Hester Prynne.

ANSWER: Arthur Dimmesdale

[10] Hester and Dimmesdale's daughter Pearl is described as having been plucked off this object. It grows on the cusp of the prison door in Anne Hutchinson's footsteps, and offers the reader "some sweet moral blossom".

ANSWER: rosebush

[10] This creator of Hester Prynne wrote about the inherent sin of humanity in "Rappaccini's Daughter" and *The Scarlet Letter*.

ANSWER: Nathaniel Hawthorne <MZ>

6. Answer the following about proteins involved in the last step of cellular respiration. For 10 points each:

[10] Occurring in the mitochondrial inner membrane, this final step of oxidative phosphorylation transfers negatively charged particles from NADH and FADH₂ to multiple complexes, producing water and the cellular "energy currency."

ANSWER: electron transport chain

[10] This protein containing a heme group transfers electrons from complex III and complex IV, its namesake reductase and oxidase, respectively.

ANSWER: cytochrome c

[10] This enzyme produces its eponymous NTP "energy currency" of the cell by adding a phosphate group to a precursor. The passage of protons through the membrane drives a rotating component of this enzyme.

ANSWER: ATP synthase [or adenosine triphosphate synthase] <SH>

7. Animation relies on various photographic and artistic techniques to make objects "move". For 10 points each, name some of them:

[10] Clay models are often used in this animation technique, where an object is manipulated in small increments while multiple frames are taken. It was used to animate *Coraline* and *Wallace and Gromit*.

ANSWER: stop-motion animation

[10] Once stop-motion frames are obtained, an animator or software program can trace the images and superimpose them on a background in this process.

ANSWER: rotoscoping

[10] This other technique converts 3D objects to 2D ones by changing the lighting and depth while retaining sharpness. It is frequently used to give video games a cartoony feel.

ANSWER: cel shading <RN>

8. With the rise of political corruption during the Gilded Age, cartoonists at political magazines sought to inform the public better. For 10 points each:

[10] One caricature shows "Emperor" Boss Tweed, who controlled this Democratic Party political machine in New York City. It reached its heyday in the Gilded Age but lasted until the mid-1900s.

ANSWER: Tammany Hall [or Society of Saint Tammany]

[10] This cartoonist for *Harper's Weekly* often caricatured Boss Tweed and Tammany Hall. He is credited with creating the modern-day version of Santa Claus and the elephant symbol for the Republican Party.

ANSWER: Thomas Nast

[10] This magazine, founded by Joseph Keppler, featured many satirical political cartoons. Named after a mischievous character from *Midsummer Night's Dream*, it leaned Democratic and pro-German.

ANSWER: Puck <JL/RN>

9. Due to Soviet irrigation projects, it has shrunk to ten percent of its original size in the past twenty years. For 10 points each:

[10] Name this lake formerly replenished by the Syr Darya river. Its northern half lies in Kazakhstan.

ANSWER: Aral Sea

[10] The southern half of the Aral Sea is in this country, which includes the cities of Samarkand and Tashkent. It is also the only doubly landlocked country in Asia.

ANSWER: Uzbekistan

[10] Most of this country directly south of Uzbekistan is covered by the Karakum desert. It is bordered to the west by the Caspian Sea.

ANSWER: Turkmenistan <DM>

10. Pope Leo III ordered an image of Christ to be replaced with a cross, and the removal of the Great Sphinx's nose can possibly be attributed to a Sufi fanatic committing it. For 10 points each:

[10] Name this action in which a culture destroys its own religious depictions.

ANSWER: iconoclasm

[10] The aforementioned statue of Christ was from this Empire, which had two periods of iconoclasm. Artworks from it frequently featured mosaics with glass tiles underlaid by gold leaf, like one depicting Justinian and his attendants.

ANSWER: Byzantine Empire

[10] This Austrian, a member of the Vienna Secession movement, was heavily influenced by Byzantine art. Many of his works feature gold-leaf foil, such as his mosaic-like *The Kiss* and his *Beethoven Frieze*..

ANSWER: Gustav Klimt <AT>

11. This novel's protagonist studies and teaches at Lowood, before taking a job as a governess at Thornfield Hall. For 10 points each:

[10] Name this novel by Charlotte Bronte which follows the life of the title character through her marriage to Mr. Rochester.

ANSWER: Jane Eyre

[10] Name this insane wife of Mr. Rochester, who attempts to burn down the house and eventually commits suicide. She is of Creole descent, and met Rochester in Jamaica.

ANSWER: Bertha Mason

[10] Dominican author Jean Rhys reimagined Bertha Mason as Antoinette Cosway in this 1966 postcolonial prequel to *Jane Eyre*. It follows Antoinette's life up to her confinement and descent into madness in England.

ANSWER: Wide Sargasso Sea <SH>

12. Some loose fiber-optic cables led to calculations that these particles might travel faster than the speed of light. Spoiler alert: they don't. For 10 points each:

[10] Name these subatomic particles denoted ν . They come in electron, muon, and tau flavors, and are produced by nuclear reactions in the sun.

ANSWER: neutrinos

[10] Like all other fermions, neutrinos have spins that take these values.

ANSWER: half-integer [prompt on nonintegral, noninteger, or the like; grudgingly accept anything like "non-integral multiples of one-half"]

[10] Since there are two equivalent spin states for electrons, which are fermions, each energy level in an atom can hold twice as many particles as would normally be allowed by this man's namesake "exclusion principle."

ANSWER: Wolfgang Pauli <SH>

13. One of its advertisements sparked controversy when “America the Beautiful” was sung in languages other than English. For 10 points each:

[10] “I’d like to teach the world to sing in perfect harmony” is a line from a commercial for this company, whose more recent campaigns have featured polar bears and the slogan “Open happiness”.

ANSWER: The Coca-Cola Company [accept Coke]

[10] Coca-Cola attempted to replace Coke with this product in the 80s. This extremely sweet beverage outperformed Pepsi in taste tests, but met a highly negative backlash when it rolled out.

ANSWER: New Coke [or Coke II]

[10] New Coke contradicted ad campaigns featuring this man, who pitched Coke’s less-sweet taste as an advantage over Pepsi. He also starred in a series of pudding pop commercials, but is more famous for creating a sitcom about the Huxtable family.

ANSWER: Bill Cosby <MZ>

14. Rudyard Kipling’s *White Man’s Burden* was written to promote this concept. For 10 points each:

[10] Name this policy of one nation dominating others by military, economic, or political means. Colonialism is basically a subset of this aggressive strategy.

ANSWER: imperialism [do not accept "colonialism"]

[10] At this imperialists’ conference organized by Otto von Bismarck, European leaders carved up Africa into various spheres of influence in order to prevent a colonial war over King Leopold’s colonization of the Congo.

ANSWER: Berlin Conference [or Congo Conference; or West Africa Conference; do not accept “Berlin Congress”]

[10] King Leopold II’s creation of the Congo Free State was largely designed to extract this resource. Laborers who failed to extract enough of this resource to meet quotas often had their hands chopped off.

ANSWER: rubber <JL>

15. He introduced the idea that nations should only participate in industries in which they could compete most effectively. For 10 points each:

[10] Name this classical economist, credited with formulating the Iron Law of Wages and the principle of comparative advantage.

ANSWER: David Ricardo

[10] Ricardo claimed that this set of British tariffs, which taxed imported cereals, had led to economic stagnation by rewarding landowners for planting unprofitable goods.

ANSWER: Corn Laws

[10] This modern-day political group aims to liberalize trade and tariff law. It succeeded the General Agreement on Tariffs and Trade.

ANSWER: World Trade Organization [or WTO] <ZP>

16. The return of the oboe at the end of this work indicates that one character has been swallowed alive. For 10 points each:

[10] Name this narrated work in which a muted oboe represents a duck, a timpani represents hunters’ gunshots, and a bassoon represents the title protagonist’s grandfather.

ANSWER: Peter and the Wolf

[10] *Peter and the Wolf* is by this man who composed a work “as Haydn might have written it,” his *Classical Symphony*. He also wrote the *Lieutenant Kije* (kee-ZHAY) *Suite*.

ANSWER: Sergei Prokofiev

[10] In this satirical opera by Prokofiev, the witch Fata Morgana curses the Prince to become enamored with the title fruits. It features a notable March and Scherzo.

ANSWER: The Love for Three Oranges [accept *L’amour des Trois Oranges*] <AT>

17. Answer these questions about Classical rhetorical devices in literature, for 10 points each.

[10] Homer used this device in his dactyls to capture the galloping of horses. In general, it involves using language that evokes an appropriate sound.

ANSWER: **onomatopoeia**

[10] Referring to war as Mars or a tree as wood are examples of this device, the substitution of one word for a related concept. It is not to be confused with synecdoche (“sin-ECK-do-key”), in which a part is substituted for a whole.

ANSWER: **metonymy** (“meh-TAW-neh-me”)

[10] Polysyndeton and asyndeton create emphasis by respectively overusing and neglecting to use these parts of speech. In Latin, the suffix *-que* (“KWEH”) and the words *et* and *aut*, meaning *and* and *or*, are these parts of speech.

ANSWER: **conjunctions** <ZP>

18. The constant associated with this state, symbolized K_{eq} , is equal to the concentration of products over reactants. For 10 points each:

[10] Name this state in which the forward and reverse rates of a reaction are equal.

ANSWER: **equilibrium**

[10] This law states that equilibrium will shift to counteract changes in concentration, temperature, volume or pressure.

ANSWER: **Le Chatelier's** principle [accept **Le Chatelier's** law, rule, etc.]

[10] In this consequence of Le Chatelier's principle, adding a solute that contains the same charged constituent as a salt in solution reduces the solubility of the salt, shifting the equilibrium to the left.

ANSWER: **common ion** effect <AT>

19. For 10 points each, answer these questions about sacred farm animals of the gods.

[10] These sacred animals of Apollo are commonly depicted as red. Heracles's tenth labor was to capture some of these animals belonging to the vicious Geryon.

ANSWER: **cattle** [or **cows**]

[10] This horse-figured gaulish goddess, a protector of horses, donkeys, and mules, was a leader of the soul in the Celtic afterlife. Her name literally means Great Mare, and she was later on worshipped in Rome.

ANSWER: **Epona**

[10] In Mesopotamia, the horns of a bull are said to represent this object. The Titaness Selene, who is usually depicted riding on a horse, is the Greek personification of this object.

ANSWER: **moon** <TZ>

20. In 1931, the city of Mukden witnessed an explosion on a railway. For 10 points each:

[10] Name this Japanese puppet regime, ruled by Pu Yi, that saw the Mukden incident occur. A Russian-built South Manchurian Railway was a feature of this *de facto* Qing Dynasty-controlled polity.

ANSWER: **Manchukuo** [or **Manzhouguo**]

[10] This country was invaded by Japan in the Mukden incident. It was led by Chiang Kai-Shek and earlier by Sun Yat-Sen.

ANSWER: Republic of **China** [or Nationalist **China**; or **Zhōnghuá Mínguó**]

[10] This city, later the capital of Jiangsu, saw Sun Yat-Sen rise to power in the 1911 Xinhai Revolution. In 1937, Japanese soldiers carried out a horrific rape and massacre in this city.

ANSWER: **Nanjing** [or **Nanking**] <RN>

TB. The TA-CD vaccine for this substance pairs a derivative of it with cholera toxin B. For 10 points each:
[10] Identify this drug and mild anesthetic that increases dopamine levels by inhibiting dopamine reuptake. Formerly an ingredient in Coca-Cola, it can be smoked in its freebase form as crack.

ANSWER: cocaine

[10] This drug increases dopamine levels by hogging transporters and dumping dopamine into the synaptic cleft. Mixed with its enantiomer in Adderall, it improves alertness and concentration but causes aggression and grandiosity.

ANSWER: amphetamine [do not accept or prompt on "methamphetamine" or "meth"]

[10] Cocaine and amphetamine are both triple reuptake inhibitors because they act on dopamine, serotonin, and this neurotransmitter. Along with its methylated form, it plays a major role in the fight-or-flight response.

ANSWER: norepinephrine [or noradrenaline; do not accept "epinephrine" or "adrenaline"] <MZ>