**Bulldog High School Academic Tournament XXII (2013): *Praxis*? We Talkin' Bout *Praxis*, Man**

**By Yale Student Academic Competitions**

**Edited by Matt Jackson and Ashvin Srivatsa, with Kevin Koai and Spencer Weinreich**

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**Round Twelve Tossups**

1. One character in this novel sells horses at inflated prices to those fleeing a war-torn city. Another character is made governor of Coventry Island by the Marquis of Steyne. In this book, a female graduate of Miss Pinkerton’s Academy is loved by William Dobbin though she is married to George Osborne, who dies in battle at Waterloo. It focuses on the good-natured Amelia Sedley and the anti-heroine, Becky Sharp. It takes its name from a locale in *Pilgrim’s Progress* and is subtitled “A Novel without a Hero.” For 10 points, name this novel by William Makepeace Thackeray.

ANSWER: ***Vanity Fair****: A Novel without a Hero* <AT>

2. Before playing Benny, Chris Jackson was starring as this character when Lin-Manuel Miranda decided to cast Jackson in *In the Heights.* This character exclaims “I laugh in the face of danger! Ha! Ha! Ha!” in front of a giant skull, and sings “Endless Night” in a Broadway version of his story. The phrase “Nants ingonyama bagithi baba!” announces his birth at sunrise. This male plays in an elephant graveyard as a child, when he “just can’t wait to be king,” and sees his dead father’s face in the stars before returning to Pride Rock. For 10 points, name this animal advised by Zazu and Rafiki, who kills Scar to avenge his father Mufasa in Disney’s *The Lion King.*

ANSWER: **Simba** <MJ>

3. This author wrote a fairy tale about a wish-granting golden fish. A one-act play by this author, which features a composer drinking poisoned wine, inspired Peter Shaffer’s *Amadeus*. This creator of the servant Guillot penned *Mozart and Salieri* and devised a verse form later used in Vikram Seth’s *The Golden Gate.* This author wrote a “little tragedy” titled for the statue that killed Don Juan, *The Stone Guest.* This part-black author used sonnets to write a novel in which Tatyana Larina’s lover kills Vladimir Lensky in a duel. For 10 points, name this Russian author of *Boris Godunov* and *Eugene Onegin*.

ANSWER: Alexander Sergeyevich **Pushkin** <AT>

4. One artist in this movement showed a nearly-nude, muscular, black-and-white man posing in a color living room, in *Just what is it that makes today’s homes so different, so appealing?* Another artist from this movement painted a woman who would “Rather sink--than call brad for help,” and used Ben-Day dots to paint an aircraft in *Whaam!* An artist of this movement worked in a studio called the “Factory,” got irked by fellow member Roy Lichtenstein, and used silk-screen techniques to make many prints of Marilyn Monroe and Campbell’s soup cans. For 10 points, name this movement including Andy Warhol, which incorporated elements of commercial mass culture.

ANSWER: **Pop** art <BS>

5. In one device in which this process occurs, lasers are fired at both apertures of a hohlraum. This process is employed in the secondary in the Teller-Ulam device. Another device in which it occurs is covered in a lithium blanket, which breeds tritium from fast neutrons; that device is a tokamak, in which a plasma is magnetically confined. Muon catalysis lowers the activation energy for this process over a million-fold. Astrophysically, this occurs in the proton-proton chain, which culminates in the formation of helium and is the primary source of energy in the sun. For 10 points, name this process in which lighter elements are combined to form heavier elements.

ANSWER: nuclear **fusion** [prompt on “nuclear reactions”; do not accept “fission”] <AS>

6. This ruler’s armies won the Battle of the Dunes under Marshal General Turenne. At the end of the Nine Years’ War, his claim to Caribbean territory was recognized in the Treaty of Ryswick, and he was threatened by a triple alliance during the War of Devolution. This survivor of the Fronde employed finance minister Jean-Baptiste Colbert. He revoked protections for Huguenots in the Edict of Fontainebleau, but the expansion of his House of Bourbon faltered in the War of Spanish Succession. This king, served in youth by Cardinal Mazarin, proclaimed “I am the state.” For 10 points, name this builder of Versailles, an absolutist “Sun King” of 17th-century France.

ANSWER: **Louis XIV** [or **Louis Quatorze**; or **Louis the Great**; or **Louis le Grand**; accept “**Louis the Sun King**” or “**Louis le Roi-Soleil**” until mentioned; prompt on “Louis”; prompt on “Sun King” or “Le Roi-Soleil” until mentioned] <JW>

7. In one work in this genre, a captive sticks his right hand in a fire to show his willingness to die, and sacred geese quack to warn of invaders; 35 of that work’s 142 parts survive. One work of this type, *The Jugurthine War*, is by Sallust; the first ten books of another inspired “discourses” by Machiavelli. This genre includes a work in which Camillus and Tarquinius Superbus are exiled and another whose author disputes whether a leader played music as his capital burned. They include the *Annals* and *Ab Urbe Condita* by Tacitus and Livy. For 10 points, name these works that mark time by naming the two new consuls each year, and recount the past of a Latin civilization.

ANSWER: **histories** of **Rome** [or **Roman histories**; accept equivalents synonymous with an account of the past of **Rome**, the **Roman** Republic, the **Roman** Empire, etc.; accept “**annal**s of **Rome**” or “**Roman annal**s” until “*Annals*”; prompt “histories” or equivalents; prompt “descriptions of Rome” or equivalents not explicitly involving a span of historical time; prompt on “Latin history,” “works in Latin,” or equivalents] <JW>

8. Like Darius Milhaud's *La création du monde*, this composition makes extensive use of the “Good evening, friends” riff. One famous feature of this piece was originally improvised by Ross Gorman during a rehearsal. One of its themes is sometimes known as the “Train” theme, and it was supposedly inspired by the “steely rhythms” and “rattle-ty bang” of a train ride to Boston. It was commissioned by the bandleader Paul Whiteman, and it is usually heard in an orchestration by the composer of the *Grand Canyon Suite*, Ferde Grofé. It opens with a trill and glissando for a solo clarinet. For 10 points, name this piece for solo piano and jazz band by George Gershwin.

ANSWER: ***Rhapsody in Blue*** <KK>

9. One saint of this first name, who allegedly resurrected a Welshman eight years after his own death, was a bishop of Hereford surnamed de Cantilupe. Around 1400, a sainted monk of this given name wrote *Imitation of Christ.* A thinker of this name used the phrases “On the contrary…” and “I answer that…” to reply to lists of objections to Catholicism, and used the phrase “The Philosopher” to refer to Aristotle. A Biblical apostle of this name was invited to touch the marks of nails in Jesus’s hands after the Resurrection. For 10 points, give this first name common to the sainted author of *Summa Theologica* and a “doubting” apostle.

ANSWER: Saint **Thomas** [accept **Thomas** de Cantilupe, or Saint **Thomas** Aquinas, or Doubting **Thomas**; or **Tomaso** d’Aquino] <MPG>

10. These things can be partially described by spherical harmonics with L-index 1. They have a single nodal plane and are bilobate. In an aufbau table, one of these things is the third thing that is added-to. In hydrogen, electronic transitions down to them lie in the visible range and are named for Balmer. In methane, these orbitals on the carbon atom are given the exponent “3” when hybridized to form a tetrahedral geometry. Their name is the same as the symbol for a nonmetallic element that has red and white allotropes and is used in matches. For 10 points, name these things that are higher in energy than s orbitals and share a name with the chemical symbol for phosphorus.

ANSWER: **p** orbitals [prompt on “phosphorus” before it is read] <AS>

11. In one book by this author, Boa and Cava meet at a “windowless latrine.” Another of his books features secret police managed by Cayo Bermúdez, who works for Odría, and a dog pound where the chauffeur Ambrosio finds the newspaperman Zavalita. The Circle is a gang created by this writer, whose leader, Jaguar, steals a chemistry exam. In a novel by this author of *Conversation in the Cathedral*, a cadet is shot at the Leoncio Prado Military Academy, and in another, soap operas are broadcast by Radio Panamericana, which employs Mario and Pedro Camacho. For 10 points, name this Nobel-winning author of *The Time of the Hero* and *Aunt Julia and the Scriptwriter*, a Peruvian.

ANSWER: Mario **Vargas Llosa** (“YOH-sah”) [or Jorge Mario Pedro **Vargas Llosa**, First Marquis of Vargas Llosa; or Jorge Mario Pedro **Vargas Llosa**, Primer Marqués de Vargas Llosa; do NOT accept or prompt on “Llosa” alone] <JW>

12. The Castle Hill rebellion occurred in this eventual country, where another rebel distributed large quantities of illegally-shipped rum to the populace. Its Liberal Party was founded by Robert Menzies (“Mingus”). One criminal from this country fashioned his own suit of armor and got besieged at Glenrowan. The Irish-decended Ned Kelly terrorized this country, which separated mixed-race children from their parents in the “stolen generations” policy, for which it apologized in 2007. For 10 points, name this nation which was founded with prison colonies at Botany Bay and New South Wales and killed off many boomerang-using aborigines.

ANSWER: Commonwealth of **Australia** <MJ>

13. This man used a spear to defeat a fire-breathing musician who appears yearly, named Aillen. A cycle of poems about this man are told by his son, who related this man’s tales after staying in the land of the young for three hundred years. This man had a wife who was turned into a deer, and his band of warriors included the traitorous Goll mac Morna. This father of Ossian burned his thumb cooking the Salmon of Knowledge at the orders of his tutor Finegas. For 10 points, name this folk hero of the Fenian cycle, who sleeps in a cave beneath Ireland.

ANSWER: **Finn MacCool** [or **Fionn mac Cumhaill**; or **Deimne**; or **Finn MacCooill**] <DL>

14. An old wooden house in this city has stood since 1528 along a courtyard once used by medieval lay sisters called beguines. One historical building in this city maintains a traditional sand floor as Sephardic émigrés used it. This home of the Magere Brug drawbridge and the Portuguese synagogue is served by Schiphol airport. Its visitors must distinguish bars called “cafés” from “coffeeshops,” which actually sell cannabis. This European city’s center contains a floating flower market within the Canal Ring and features De Wallen, a red-light district. For 10 points, name this home of the preserved Anne Frank house, the largest city of the Netherlands.

ANSWER: **Amsterdam** <MJ>

15. Wrangham and Peterson observed these creatures’ violent behavior before positing the “demonic males” hypothesis. Their vocalizations include the crescendoing, accelerating “pant hoot.” Beatrix and R. Allen Gardner ran a study on one of these named Washoe. The book *In the Shadow of Man* describes the splitting of a group of these creatures at Gombe stream. The failure of Project Nim verified Noam Chomsky’s opinions on these creatures’ cognitive ability. These closest relatives of the hypersexual bonobo were studied in the wild by Jane Goodall. For 10 points, name these members of genus *Pan* who can be taught linguistic hand signs, a type of great ape.

ANSWER: **chimp**anzees [or ***Pan*** *troglodytus* before mention] <MJ>

16. This resource was controlled by four Irish-American “Bonanza kings” in settlements such as Virginia City and Washoe. In Congress, this substance overlooked by the “crime of ‘73” was the subject of a bill passed over Hayes’s veto, the Bland-Allison act. This resource was found domestically in the Comstock Lode of Nevada, and Paul Revere’s shop worked with it before his midnight ride. This resource was the larger term in a 16 to 1 ratio advocated by the Populist Party, which sought to ease up the debt of farmers through its unrestricted, or “free,” coinage. For 10 points, name this metal which was shunted by the gold standard.

ANSWER: **silver** [accept **Ag**] <MJ>

17. The majority of molecules in this thing are synthesized from CDP-choline. Integrins pass through it to couple microfilaments to the ECM. One ATPase in it maintains this structure’s resting potential by actively exchanging 3 of one ion for 2 of another; that is the sodium-potassium pump. In some bacteria, the periplasm lies outside it. The tonicity of an animal cell is defined by the pressure gradient across it. Clathrin may coat vesicles that bud off of it during endocytosis. It broadly consists of mosaic of proteins embedded in a fluid-like phospholipid bilayer, and sometimes lies beneath a cell wall. For 10 points, name this thin, deformable structure that encloses the cytoplasm.

ANSWER: cell **membrane** [or **plasma membrane**; do not accept “cell wall”] <AS>

18. In one of this author’s short stories, which repeats the sounds “Ugh! Ugh! Ugh!” five times in a row to depict a cough, a noble mentions that his family motto is “Nemo me impune lacessit.” A story by this author features Jupiter, a servant who helps the treasure-seeking William Legrand. A cry of “For the love of God, Montresor!” comes as Fortunato is entombed in a short story by this author of “The Gold Bug” and “The Cask of Amontillado.” This creator of the detective C. Auguste Dupin also mentioned a “bust of Pallas” in a poem whose title bird repeatedly says “Nevermore.” For 10 points, name this author of “The Raven.”

ANSWER: Edgar Allan **Poe** <JW>

19. In numerical algorithms, machine epsilon measures the degree to which this operation affects the outcome of floating-point operations, and the degree to which the resulting errors are amplified is described by the condition number. For a variable *x*, *x* minus this function of *x* yields a sawtooth wave. To express an arbitrary-precision number using a given number of significant digits, one must perform this operation. One form of it is written using square brackets with the bottom part removed and is called “ceiling”. For 10 points, name this operation, contrasted with truncation, in which a number is approximated by a less-precise number, and which might convert 3.7 to 4.

ANSWER: **round**ing (up or down) [or **floor**; or **ceil**ing before it is read; prompt on “truncation” or word forms before it is read] <AS>

20. A wielder of one of these objects killed the Ksatriya caste 21 times over after getting his as a gift from Shiva. The Basque separatist group ETA uses one of these objects and a snake in its symbol. Parashurama is “Rama with” one of these objects, of which the *francisca* was a “throwing” type used by Frankish soldiers. A bundle of sticks surrounds one in the ancient Roman *fasces* symbol. Lizzie Borden was acquitted of using one of these on her male relatives, and the owner of the blue ox Babe used another with an especially large haft. For 10 points, name this tool used by folk hero Paul Bunyan to cut trees.

ANSWER: **ax**es [or an **axe**; or **hatchet**s] <MJ>

**[STOP HERE]**

[You have reached the end of the round. Do not continue reading unless the game is tied or a tossup was thrown out earlier in the round.]

21. In adults, these cells are created in the subventricular zone, which is bounded by the ependyma. When Substance P is released by these cells in response to nociceptive stimuli, inflammation occurs. Schwann cells coat parts of these cells in an insulating sheath, the loss of which can lead to multiple sclerosis. They form a primitive “net” in cnidarians, but form a more complex system that includes somatic and autonomic branches in chordates. Astrocytes, a type of glial cell, help regulate the plasticity of the synapses between these cells. For 10 points, name these cells whose dendrites receive signals from axons.

ANSWER: **neuron**s [or **nerve** cells] <AS>

Bonuses

1. The title object of this poem is a“still unravish’d bride of quietness” and “a sylvan historian” too. For 10 points each:

[10] Name this poem, which describes a scene in “Tempe or the dales of Arcady,” where youths forever chase after fair maidens and “pipes and umbrels…pipe to the spirit ditties of no tone.”

ANSWER: ***Ode on a Grecian Urn***

[10] This Romantic poet who declared that “beauty is truth, truth beauty” in *Ode on a Grecian Urn* also considered flying on “the viewless wings of poesy”in his *Ode to a Nightingale*.

ANSWER: John **Keats**

[10] According to this poem, Keats is well-acquainted with the isles “which bards in fealty to Apollo hold.” After he did the title action, he felt as “stout Cortès” did upon first sighting the Pacific with “eagle eyes.”

ANSWER: ***On First Looking into Chapman’s Homer*** <GL>

2. This holiday falls annually on the first day of Tishrei. For 10 points each:

[10] Name this holiday, the Jewish New Year, which is followed in ten days by the atonement-heavy Yom Kippur.

ANSWER: **Rosh Hashanah**

[10] This instrument, traditionally made from a ram's horn, is blown by Biblical command on Rosh Hashanah.

ANSWER: **shofar**

[10] This specialized prayer book is traditionally used in place of a normal *siddur* on Rosh Hashanah and Yom Kippur.

ANSWER: **machzor** [or **mahzor**] <DSt>

3. This nation was forced to cede Petsamo in the Moscow Peace Treaty. For 10 points each:

[10] Name this north European nation, which fought alongside Nazi Germany during the siege of Leningrad. It lost the Continuation War to the Soviet Union, to which it leased Porkkala, roughly twenty miles from Helsinki.

ANSWER: Republic of **Finland** [or **Suomi**; or **Suomen** Tasavalta; or Republiken **Finland**]

[10] The Continuation War followed this other conflict, a pyrrhic victory for the U.S.S.R. over Finland which began late in 1939.

ANSWER: **Winter** War [or **Talvisota**; or **Zimnyana** Voyna; or **Vinter**kriget]

[10] The Soviets broke through this series of Finnish fortifications across the Karelian Isthmus in the Battle of Summa. This barrier named for a Finnish Field Marshal was replaced by the Salpa line.

ANSWER: **Mannerheim** Line [or **Mannerheim**-linja; or Liniya **Mannergeyma**; or **Mannerheim**linjen] <JW>

4. After these things cease to be, the continents rebound isostatically. For 10 points each:

[10] Name these things that are major agents of erosion. They can pluck rocks out of bedrock and transport them hundreds of miles away.

ANSWER: **glacier**s [accept **ice sheet**s]

[10] These things are found near the feet of glaciers. One of them named Agassiz was the precursor to the modern “Great” ones. Some of the ones produced by glaciers are called “kettle” ones.

ANSWER: **lake**s

[10] Glacial lakes may be dammed by these piles of debris and sediment that are transported by glaciers. They *notably* come in lateral and terminal varieties.

ANSWER: **moraine**s <AS>

5. In a still-ongoing experiment, Richard Lenski observed some of these organisms develop the ability to metabolize citrate. For 10 points each:

[10] Name this bacterium that is often used as a model organism, sometimes in the study of lactose metabolism. Some strains of it cause food poisoning.

ANSWER: ***E. coli*** [or ***Escherichia coli***]

[10] *E. coli* regulates lactose metabolism using one of these genetic units, denoted *lac*. In the presence of lactose, the repressor in this unit is inhibited, thus allowing the synthesis of enzymes like beta-galactosidase.

ANSWER: *lac* **operon**

[10] Another well-studied operon in *E. coli* regulates the synthesis of this essential amino acid, with abbreviation “W”. It has an indole side-chain, and is a precursor to serotonin.

ANSWER: **tryptophan** <AS>

6. In one work by this man, a hare-lipped gardener tries to escape his home of Cape Town. For 10 points each:

[10] Name this South African author of *The Life and Times of Michael K*. He wrote about David Lurie in his novel *Disgrace* before emigrating to Australia to live as a recluse.

ANSWER: J. M. **Coetzee** [or John Maxwell **Coetzee**]

[10] Coetzee fictionalized this author’s life in *The Master of Petersburg.* On his own, this author of *Notes from Underground* wrote about Raskolnikov in *Crime and Punishment.*

ANSWER: Fyodor Mikhailovich **Dostoevsky**

[10] A psychological warfare project in this country features in Coetzee’s first novel *Dusklands*. Owen Meany dies in this war-torn country in a John Irving novel, and Ozymandias’s servants hail from here in *Watchmen.*

ANSWER: **Vietnam** [or North **Vietnam**; or South **Vietnam**] <DL>

7. Answer these questions about church architecture, for 10 points each.

[10] This part of a church extends down the center from the entrance, and is separated from the apse by the transept. The congregation normally sits in this area.

ANSWER: **nave**

[10] This medieval architectural style of Reims and Chartres cathedrals often used heightened naves. Its pointed arches, ribbed vaults, and flying buttresses reinforced the increased height.

ANSWER: **Gothic** architecture

[10] This term refers to any window above eye level, used to let light into a church. In Gothic cathedrals they are often situated above the nave arcade or the triforium.

ANSWER: **clerestory** [or **clearstory**; or **overstorey**] <BS>

8. It equals the natural logarithm of 2 divided by the decay constant. For 10 points each:

[10] Name this characteristic time-scale of radioactive decay. After this much time, a certain fraction of a radioactive substance will have decayed.

ANSWER: **half-life**

[10] This term refers to the sequence of isotopes a radioactive element decays into before reaching a stable isotope. When multiple decay modes are available, they are said to “branch”.

ANSWER: decay **chain** [or decay **series**]

[10] The thorium, actinium, and radium decay series all end in some isotope of this element. Once it was discovered that all isotopes of bismuth were actually unstable, this element was recognized as the heaviest stable element.

ANSWER: **lead** [or **Pb**] <JG/AS>

9. This politician delivered the “Tryst with Destiny” speech. For 10 points each:

[10] Name this co-founder of the Non-Aligned Movement who was in power during the Sino-Indian War as India’s first prime minister.

ANSWER: Jawaharlal **Nehru**

[10] Nehru’s Operation Vijay attacked this country’s colonies of Daman and Diu. This European nation lost Angola and Mozambique before its Carnation Revolution toppled Antonio Salazar’s successor.

ANSWER: **Portugal** [or **Portuguese** Second Republic; or Segunda República **Portuguesa**]

[10] The main target of Operation Vijay was this Portuguese colony, which was subsequently annexed to India. This smallest Indian state lies on the Arabian Sea between Maharashtra and Karnataka.

ANSWER: **Goa** <JW>

10. Musical artists shouldn’t have their names constrained to alphanumeric symbols. For 10 points each, answer these questions about singers who think so, at least:

[10] This artist, whose real name is Alecia Moore, has a punctuation mark in her stage name. In her number 1 hit she says “So what? I’m still a rock star / I’ve got my rock moves / And I don’t need you!”

ANSWER: **P!nk**

[10] This singer-songwriter of “Die Young” was uncredited on Flo Rida’s “Right Round.” A new single off her album *Warrior* is a synth-pop dance number called “C’Mon.”

ANSWER: **Ke$ha** Rose **Sebert** [accept either underlined name]

[10] This artist was “formerly known as” an unpronounceable moniker later dubbed “Love Symbol #2.” His lovely song “Kiss” was covered in an dismal episode of Glee where Matthew Morrison sings falsetto.

ANSWER: **Prince** Rogers Nelson <IP>

11. At one point in this play, the main character recounts a dream of climbing a pillar and being unable to come back down. For 10 points each:

[10] Name this play about a Count’s title daughter, who was taught to “think like and act like a man” but still has feelings for her servant Jean.

ANSWER: ***Miss Julie*** [or ***Froken Julie***]

[10] This Swedish author created Jacob Hummel in *The Ghost Sonata* and wrote *Miss Julie*.

ANSWER: August **Strindberg**

[10] At the end of *Miss Julie,* Jean convinces Julie to walks offstage and perform this act, which Juliet does before Romeo in Act V of *Romeo and Juliet*.

ANSWER: **kill** her**self** [or commit **suicide**; or **stab** her**self**; or **cut** her**self** with a razor] <AT>

12. She personally took on the debt of the newspaper she co-published, *The Revolution*. For 10 points each:

[10] Name this cofounder of the National Woman Suffrage Association with Elizabeth Cady Stanton, who was fined for attempting to vote in 1872. Her image later appeared on a dollar coin.

ANSWER: Susan Brownell **Anthony**

[10] Stanton and Lucretia Mott organized this 1848 meeting in New York, at which Frederick Douglass and Amy Post argued for women’s suffrage.

ANSWER: **Seneca Falls** Convention [prompt “First Women’s Rights Convention”]

[10] Stanton largely authored this document, which was presented and affirmed at the Seneca Falls Convention. It lists the “injuries and usurpations on the part of man toward woman.”

ANSWER: **Declaration of** Rights and **Sentiments** <JW>

13. Michael Sandel’s lecture course on this topic at Harvard is now freely available to the public, and the Ring of Gyges thought experiment tries to show that self-interested people should ignore this concept. For 10 points each:

[10] Name this property of a person or society. Its “distributive” form is the best way to allocate goods and its “retributive” form is the best way to punish crimes correctly.

ANSWER: **just**ice [or being **just**]

[10] This liberal Harvard philosopher defined justice as fairness*.* He argued that people should form societies based on a “veil of ignorance” about what their social status will be in *A Theory of Justice*.

ANSWER: John Bordley **Rawls**

[10] Rawls’s social contract approach resembles this British empiricist, who argued that a social contract had to protect “life, liberty, and estate” in  *Two Treatises of Government* and proposed the “tabula rasa”.

ANSWER: John **Locke** <IP/MJ>

14. This effect arises from the buildup or spreading-out of wavefronts. For 10 points each:

[10] Name this effect, in which the frequency of a wave is altered by the motion of the emitter and the receiver.

ANSWER: **Doppler** effect [or **Doppler** shift]

[10] The Doppler effect can cause these optical phenomena to broaden. They have a natural nonzero width due to thermal motion. They correspond to defined transitions in media with which the radiation of interest has interacted.

ANSWER: **spectral line**s [accept **absorption line**s; accept **emission line**s]

[10] The 21-centimeter line and the Lyman series both appear in the spectrum of this element. It is sometimes said that the only systems quantum mechanics can solve are the harmonic oscillator and this element’s atom.

ANSWER: **hydrogen** atom <AS>

15. This was the primary instrument of the best Liechtensteinian composer ever, Josef Rheinberger, who wrote twenty sonatas for it. For 10 points each:

[10] Name this instrument also played by Dieterich Buxtehude. Low notes on this instrument are played by depressing pedals with the feet, and performers use stops to control which pipes the air flows through.

ANSWER: pipe **organ**

[10] The third symphony of this French composer is nicknamed for its prominent organ part. He wrote an *Introduction and Rondo Capriccioso* for violin and orchestra, as well as *Danse macabre*.

ANSWER: Camille **Saint-Saëns**

[10] This French organist and composer wrote *Livre du Saint Sacrement* for the organ. He also composed the *Turangalila-Symphony* and the *Quartet for the End of Time*.

ANSWER: Olivier **Messiaen** <KK>

16. Under manorialism, these people worked the fields of a lord in exchange for protection and defense. For 10 points each:

[10] Name this economic class of most pre-industrial western European commoners. Many were freed from serfdom as the Middle Ages ended, and Wat Tyler led a British revolt of this class.

ANSWER: **peasant**s [or the **peasant**ry; or **villein**s; or **churl**s; or **cottar**s; prompt “freemen;” prompt “farmers”]

[10] These industrial production sites transformed peasant life in Germany’s Ruhr valley by extracting a useful resource. In Britain, the Davy lamp provided safe light in these explosion-prone places.

ANSWER: **coal mine**s [or **coal field**s or **coal pit**s; or **colliery**/ies; prompt “mines,” “mine shafts,” “tunnels,” or “caves”]

[10] In the 18th century, many peasants engaged in this form of labor, by which they worked raw materials into products within their homes and sold them to a central distributor.

ANSWER: **cottage industry** [or “**putting out**” system] <MJ>

17. Name these places which are home to different breeds of ponies, for 10 points each.

[10] The Sable Island Pony lives wild off the coast of this Canadian province. Including Cape Breton, this Maritime province across the Bay of Fundy from New Brunswick has its capital at Halifax.

ANSWER: **Nova Scotia** [or **Nouvelle-Écosse**]

[10] This Scottish archipelago lends its name to a breed of miniature ponies. Including Yell and Unst, this archipelago with capital at Lerwick is home to the northernmost point of the U.K.

ANSWER: **Shetland** Islands [or **Shetland** Isles; or the **Shetlands**; or Eileanan **Sealtainn**; or **Shetland** Ilands; or **Zetland** Islands]

[10] “Salt Water Cowboys” drive wild horses living on this island to Chincoteague in the annual Pony Penning. This Delmarva barrier island south of Ocean City ends at Toms Cove and spans the Maryland-Virginia border.

ANSWER: **Assateague** Island <JW>

18. Answer these questions about mythical bards in old poetry, for 10 points each.

[10] The blind bard Demodocus sings of the affair between Ares and Aphrodite at the invitation of King Alcinous in this poem. Its other characters include Nausicaa.

ANSWER: *The* ***Odyssey*** [or ***Odýsseia***]

[10] This bard retells many other myths in Book X of Ovid’s *Metamorphoses*. He descends into the Underworld and convinces Hades to return his wife Eurydice (“yoo-RID-i-see”), but loses her by looking backward.

ANSWER: **Orpheus**

[10] This ancient bard and son of Ilmatar plays the harp-like kantele and can’t find a wife, according to the Finnish national epic *Kalevala*.

ANSWER: **Väinämöinen** <GL>

19. George Stevens’ 1951 film *A Place in the Sun* is based on this novel. For 10 points each:

[10] Name this Theodore Dreiser novel about the ambitious Clyde Griffiths, who flees Kansas City after a hit-and-run and is later executed after letting his lover Roberta Alden drown in a lake.

ANSWER: *An* ***American Tragedy***

[10] At the start of *An American Tragedy,* one of these buildings employs Clyde Griffiths as a bellboy. Stephen Crane wrote about a “Blue” one.

ANSWER: **hotel**s

[10] In Dreiser’s novel *Sister Carrie*, this man has an affair with, and later marries, Carrie. A wealthy manager at the beginning of the novel, he gambles away his fortune and ends up homeless in New York.

ANSWER: **George** **Hurstwood** [accept either underlined part] <AT>

20. In his old age, this artist worked mostly with paper collages, which were published as prints in the book *Jazz*. For 10 points each:

[10] Name this artist of *La Danse.* He experimented with color in a portrait of his wife with a *Green Stripe* running down her face, and in a painting where the wall blends into the tablecloth, *Red Room.*

ANSWER: Henri **Matisse** [or Henri-Émile-Benoît **Matisse**]

[10] Matisse led this modern art movement with André Derain. It officially lasted from 1904 to 1908, and critics compared its users of strong color to wild beasts.

ANSWER: **Fauvism** [or Les **Fauve**s]

[10] Matisse’s *La Danse* features *this number* of people joining hands in a circle and swaying to a rhythm.

ANSWER: **five** [or **cinq**] <BS>

21. His queen was Hersilia. For 10 points each:

[10] Name this grandson of Numitor, who overthrew Amulius after being raised by Faustulus and a she-wolf. This man was deified as Quirinus after killing his twin brother Remus and founding a city on seven hills.

ANSWER: **Romulus**

[10] Titus Tatius, a king of these people, ruled with Romulus, after their women intervened in their war with Rome. They were aided by Tarpeia, and the Romans’ seizure of their daughters is known as the “rape of (their) women”.

ANSWER: the **Sabine**s [or **Sabini**]

[10] This Vestal Virgin, a daughter of Numitor, was buried alive by Amulius for giving birth to Romulus and Remus by the god Mars.

ANSWER: **Rhea Silvia** [or **Rea Silvia**; or **Ilia**] <JW>