

Bulldog High School Academic Tournament 2014 (XXIII): Tonight I Can Write The Hardest Lines
Written by Yale Student Academic Competitions
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Packet 7 Tossups

1. These people pioneered a construction technique called "clinker building." They formed bases known as longphorts in a country where they lost at Clontarf. The larger of the Jelling stones was created by one of these people with notably bad teeth. In the East, these people were known as Varangians. These people include Oleg of Novgorod, who founded Kievan Rus, and Rollo, who founded the Duchy of Normandy. These people fought Skraelings at their colony of Vinland, in what's now Newfoundland. For 10 points, name these Germanic peoples who used longships to raid northern European villages, exemplified by Leif Erikson.

ANSWER: Vikings [or Vikingr; or Norsemen; accept Danes until "Varangians" is read] <JR>

2. Two people belonging to this vocation discuss Mercutio's death with a boy who gives them ten dollars in *The Catcher in the Rye*. A person with this vocation was dubbed Mexico's "Tenth Muse" and defended women's right to education. People of this vocation take in the reformed prostitute Thaïs in a novel by Anatole France. Sor Juana Ines de la Cruz shares this vocation with Madame Eglantine, who tells of a child slain by Jews in a story collection by Geoffrey Chaucer, and Alexander Pope's adaptation of Eloisa, who hears from Abelard. For 10 points, name this vocation of the Prioress, which is recommended to Ophelia when Hamlet tells her to get herself to a convent.

ANSWER: nuns [or Prioresses; or abbesses; or Daughters of the Church] <GL>

3. This book was written after nightly four-hour-long sessions reading classical texts in a courtly robe, according to a letter from its author. Max Weber compared this book to the Indian *Arthashastra*. This book's twenty-fifth and penultimate chapter uses the image of a flooding river to describe Fortune, and it divides men of *virtù* into "lions" and "foxes." This book ignores lessons from republics, cautions against mercenaries or flatterers, and claims that when forced to choose, one should be feared rather than loved. For 10 points, name this book which praises Cesare Borgia, a ruthless advice manual by Niccolo Machiavelli.

ANSWER: *The* Prince [or *Il* Principe] <MJ>

4. J. M. W. Turner painted this object "with a Boat between headlands," with "Whiting Fishing at Margate," and "with Sea Monsters." This object is painted to the right of the title ships in Turner's *The Slave Ship* and *The Fighting Téméraire*. This object is in the upper left of Turner's *Hannibal Crossing the Alps*. In a painting of it from the harbour of Le Havre, which also includes some loosely-painted rowboats, this object is orange. That painting subtitled for this object gave its name to the Impressionist movement and was painted by Claude Monet. For 10 points, name this object that is often depicted rising and setting.

ANSWER: the Sun [or Sol; accept sunrise; accept sunup] <JR>

5. This clade underwent significant radiation in the middle Cretaceous, displacing the more basal *Cycadophyta*. When certain parts of their perianths are undifferentiated from one another, those structures are termed tepals. Members of this clade develop a nutritive tissue around the embryo from one sperm nucleus and two polar bodies after another cell forms a tube down the style; that process is called double fertilization. Traditionally divided into monocots and dicots, these plants possess reproductive organs called pistils and stamens and often have colorful petals. For 10 points, identify this division of seed-bearing flowering plants, a sister clade to *Gymnospermae*.

ANSWER: angiosperms [or Angiospermae; or Magnoliophyta; or magnoliophytes; or Anthophyta; or anthophytes; accept flowering plants until it is read; prompt on "flowers"] <GL>

6. Nanook of the North was named for one of these creatures which determines the success of Inuit hunts. In Korean myth, one of these animals was told to eat only garlic and mugwort in a cave for one hundred days, after which she became a human. The Ainu people of Hokkaido hold these creatures sacred. In Greek myth, Arcas is turned into one of these creatures after his mom reneges on her virginity oath with Zeus. That mom, who gets put into the sky as this animal, is Callisto. For 10 points, name this type of animal which often symbolizes Russia, and whose tail is tipped off by the North Star in the constellation Ursa Minor.

ANSWER: bears [accept polar bears during the first sentence, but NOT thereafter] <ATa>

7. This writing system once contained a vaguely bow-shaped glyph called "sampi". Several law codes in this writing system were inscribed on wooden pillars. This writing system was used on the coins of a Buddhist dynasty in Bactria. This script was used to write up the abolition of debt slavery laws and the creation of a general assembly centuries after its inventors abandoned the Linear B script. Before fighting Caesar, the Gauls used this writing system, which adapted letters from Phoenician traders. For 10 points, name this writing system used by Herodotus and Solon, whose letters include omega.

ANSWER: Greek alphabet [or Greek letters; prompt on "alphabet"] <MJ>

8. This author wrote about a "crystalline light" with "Sybillic splendor" near sulphurous currents that roll down Mount Yaanek "in the misty mid region of Weir." He also wrote "All that we see or seem / Is but a dream within a dream." This man wrote about the dead maiden Ulalume and another maiden who had "no other thought / Than to love and be loved by me" and lived "In a kingdom by the sea." He wrote of objects "Keeping time, time, time" with "tintinnabulation that so musically wells," and a creature "perched on a bust of Pallas." For 10 points, name this American poet of "The Bells" and "Annabel Lee," who repeatedly wrote "Nevermore" in "The Raven."

ANSWER: Edgar Allan Poe <HX>

9. In the Book of Kings, this is the location where Elisha heals Naaman; Elisha also performs a miracle with an axe-head in this location. An altar by this place is built as a "witness" for the two and a half tribes of Gad, Reuben, and Manasseh. The town of Bethabara, adjacent to this geographical feature, is where John the Baptist resided. The Holy Spirit descended as a dove over this location, where the voice of the Father recognized Jesus as his Son. In the Book of Joshua, the priests carrying the Ark can safely cross this body of water because it stops flowing momentarily. For 10 points, name this river that the Israelites crossed to enter the Promised Land, where Jesus was baptized.

ANSWER: Jordan River [or River Jordan; or Nehar haYarden; or Nahr al-Urdun; or Iordanes] <JR>

10. In this field of mathematics, a certain class of "perfect equilibria" is commonly derived using the technique of backwards induction. "Tit-for-tat" has proven surprisingly effective as a solution to "iterated" objects studied in this field, which was originated by von Neumann. Objects of study in this field that have only Pareto-optimal solutions are called "zero-sum". A famous object of study in this field involves two agents who may choose to cooperate with one another or to defect; that situation features one Nash equilibrium. For 10 points, name this mathematical field that studies decision-making in namesake situations, using situations like the prisoner's dilemma as a model.

ANSWER: game theory [accept decision theory until "decision-making"; prompt on "economics"; prompt on "mathematics"] <AS>

11. This person realizes that a salt was effective because it was impure, and he slams his window closed during a conversation with two friends. A cane gifted to this man is broken during a crime, and Richard Enfield notes that this man's signature appears on a 90 pound check given to the family of a trampled girl. That payment was owed by another man who engenders a sense of "unexpressed deformity." This character asks his lawyer, Mr. Utterson, to secure the rights of his heir, even though that heir murdered Sir Danvers Carew. For 10 points, name this physician created by Robert Louis Stevenson, who uses a potion to turn into his vicious alter-ego Mr. Hyde.

ANSWER: Dr. Henry Jekyll [or Harry Jekyll; do NOT accept "Mr. Edward Hyde" at any point] <GL>

12. In *Die Fledermaus*, Rosalinde sings about the music of this country in the aria "Klänge der Heimat," which takes the form of a czárdás [CHAR-dahsh], a folk dance from this country. One composer from this country began a piece with a "musical sneeze"; the piece is the *Háry János Suite*, and the composer is Zoltán Kodály. Brahms imitated the music of this country in a set of dances originally written for piano four-hands. A composer from this country wrote the *Faust Symphony* and imitated the sound of its gypsy bands in a set of virtuosic works for solo piano. For 10 points name this home country of Franz Liszt, who wrote nineteen rhapsodies named for it.

ANSWER: Hungary [or Magyarország] <KK>

13. One of this band's songs begins prominently featuring two violas in its backing track. This band sang "I can stay / till it's time to go" in the responses to a reprise of the first verse of one of their songs. In one song by this band, a guitar slide down a minor third always precedes the words "Oh no." The last section of that song by this band constantly repeats the nonsense lyrics "Hela heba helloa." One of their songs begins with the line "You say yes, I say no / You say stop and I say go go go." For 10 points, name this British band behind singles like "Hello, Goodbye " and "Yellow Submarine," which were written by its members John Lennon and Paul McCartney.

ANSWER: The Beatles <JR>

14. An account of a hurricane in Christiansted written by this man convinced community members to finance his education. This man wrote that courts have "neither FORCE nor WILL, but merely judgment." This man proposed funding-at-par and assumption of state debts in his *First Report on Public Credit*. This native of Nevis in the West Indies died at Weehawken, New Jersey after advocating the first national bank, and wrote a majority of the *Federalist* papers as Jay and Madison wrote the others. For 10 points, name this American statesman who was killed by Aaron Burr in a duel, the first Secretary of the Treasury.

ANSWER: Alexander Hamilton <MW>

15. On a standard nuclide chart, the drip line for these objects is the closest drip line to the "A equals Z" line. This thing combined with a lighter thing during cosmological recombination. Most cosmic rays are these things, which are the stablest baryons, and which are about 1836 times heavier than the heaviest first-generation lepton. Unsuccessful experimental efforts to observe the decay of this particle have included Super-Kamiokande. A "chain" reaction named for these particles generates most of the sun's energy. The number of these in an atom is typically denoted "Z" and is called the atomic number. For 10 points, name this positively-charged nuclear particle.

ANSWER: protons [or hydrogen-1 nuclei; or protium nuclei; prompt on "hydrogen"] <AS>

16. In one novel by this author, Holbein's painting *The Body of the Dead Christ in the Tomb* fascinates a character who falls in love with a general's youngest daughter. In that novel by this author, Nastasya is killed by the devil-like Rogozhin. At the end of another of this author's books, the protagonist's sister Dunya marries his friend Razumikhin, and Sonya travels to a Siberian labor camp. This author of a novel about the epileptic Prince Myshkin, *The Idiot*, also wrote about the murder of a pawnbroker by Raskolnikov. For 10 points, name this Russian author of *Crime and Punishment*.

ANSWER: Fyodor Mikhailovich Dostoyevsky <JR>

17. One incarnation of this city was captured by Prince Dorgon about a month after it became the capital of the Shun Court. This modern city, where Matteo Ricci died, now holds the site of the mint that printed *chao* paper money. This city's old Summer Palace was destroyed under Lord Elgin. Old cities on this modern city's location include Dadu and Jingshi. After the accession of the Yongle Emperor, this city was made the Ming capital. This city's Legation Quarter was attacked by the Boxer rebellion. A man carrying two shopping bags was caught on film in this city in front of a line of tanks. For 10 points, name this city home to the Forbidden City and Tiananmen Square, in northern China.

ANSWER: Municipality of **Beijing** [or **Peking**; or **Beijing Shi**] <JR>

18. In an effect whose name contains this word, reactions involving heavier isotopes like deuterium proceed relatively slowly. One result of a theory whose name contains this word is that ideal gases obey a Maxwell-Boltzmann velocity distribution. A substance like diamond has this kind of stability if a high energy barrier prevents it from reacting. This kind of stability contrasts with thermodynamic stability. The field of this name studies things like pseudo-first-order rate laws and reaction rates. For 10 points, name this field which studies the rate at which reactions occur, and which shares its name with the type of energy possessed by a body in motion.

ANSWER: **kinetics** [or **kinetic** isotope effect; or **kinetic** (molecular) theory; or **kinetic** stability; or reaction **kinetics**; or chemical **kinetics**; or **kinetic** energy] <AS>

19. In this country, Watarrka National Park lies near the range of the world's largest camel herd. In the early 1900s, a series of fences were erected to keep rabbits out of this country west, one ending near Broome. In the 30s, veterans in this country's Campion district used machine guns to mow down flightless birds. The now extinct Paradise Parrot may have ranged as far north as this country's Gulf of Carpentaria. The majority of monotremes have habitats in this country, where the alleged murder of Azaria Chamberlain turned out to be the result of a dingo attack. For 10 points, name this home country of the duck-billed platypus and the koala.

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

20. In computer programming, this word precedes "violation" in a form of error caused when a program accepts inputs it can't operate on. In law, these legal constructs require a "meeting of the minds" after an offer and an acceptance. A metaphorical type of these entities, which was updated into the "original position" by John Rawls, involves treating all people as the "sovereign" and upholding their "general will". One of these "with America" was offered in the 1994 Congressional midterm elections by Newt Gingrich's Republicans. For 10 points, name these voluntary, legally-binding agreements, whose "social" form underlies the state according to Locke and Rousseau.

ANSWER: **contracts** [or **contract** violations; or social **contracts**; prompt on "agreements" until mention] <MJ>

21. This number's hexadecimal representation can be computed using the BBP spigot algorithm. By applying the method of exhaustion, Archimedes bounded this value above and below using a 96-gon. This number is the square of the Gaussian integral. A sixth of the square of this number equals the sum of the reciprocals of the perfect squares. This number is one-fourth the number of steradians in a sphere. This irrational number is the period of the tangent function and also the area of the unit circle. For 10 points, name the ratio of the circumference and diameter of a circle, whose value is approximately 3.14.

ANSWER: **pi** <NW>

Bonuses

1. The jury is still out on whether or not these objects are surrounded by firewalls. For 10 points each:

[10] Name these things that are left behind when very massive stars go supernova, which have gravity so strong that not even light can escape them.

ANSWER: black holes

[10] This scientist recently argued that black holes don't exactly have event horizons. He also formulated a theory explaining how radiation emitted from black holes eventually causes them to evaporate.

ANSWER: Stephen Hawking

[10] The exact center of a black hole is one of these things. The gist of the cosmic censorship hypothesis is that these things cannot be naked, and must be cloaked by event horizons.

ANSWER: spacetime singularity [or gravitational singularity] <AS>

2. Answer these questions about the Atlantic slave trade from the African perspective, for 10 points each.

[10] This general pattern of exchange included the "Middle Passage" by which slaves left Africa for American colonies. It also linked those colonies to Europe, and Europe to Africa.

ANSWER: "triangular trade" [or the triangle trade]

[10] Africans often accused white slavers of committing this crime aboard their ships. Jean-Bedel Bokassa of the Central African Empire was accused of this crime, which the Donner Party committed in a snowy mountain pass.

ANSWER: cannibalism [or eating people; accept any answer indicating the consumption of human beings as food; prompt on "murder" or "killing"]

[10] This African kingdom in modern-day Benin was heavily implicated in the slave trade. It set bands of female warriors against the neighboring Oyo kingdom.

ANSWER: Kingdom of Dahomey <MJ>

3. This country's folk religion features inner chambers called *honden*, which house spirits of natural phenomena known as *kami*. For 10 points each:

[10] Name this nation whose mythical first emperor was Jimmu, the home country of Shinto.

ANSWER: Japan [or Nihon; or Nippon]

[10] These gates serve as the entrance to Shinto shrines and symbolize the boundary between the spiritual and human realms. The simple *shime* variety consists of two posts joined by a knotted rope.

ANSWER: torii gates [prompt on "mon"]

[10] This unseen weapon, thought to be in the Atsoya shrine, is one of the three imperial regalia of Japan along with the Magatama jewels and a sacred mirror.

ANSWER: Kusanagi-no-tsurugi [or the Grass-cutter Sword; prompt on "sword", "imperial sword", etc.] <MW>

4. This character's mother dies after his father cooks a bunch of eels that they saw feeding on a horse's corpse. For 10 points each:

[10] Name this character from a 20th-century German novel, who can "singshatter" glass and stops growing when he is three years old.

ANSWER: Oskar Matzerath [accept either underlined part]

[10] This German novelist opened up about his service in the Nazi SS as a teenager for his memoir *Peeling the Onion*. He wrote about Oskar Matzerath in *The Tin Drum*.

ANSWER: Günter Wilhelm Grass

[10] This Baltic city, the setting of *The Tin Drum*, is where Oskar Matzerath, er, doesn't grow up. Two other volumes of a trilogy titled for this city are *Cat and Mouse* and *Dog Years*.

ANSWER: Danzig [or Gdańsk; accept Danzig Trilogy; accept Danziger Trilogie] <JR>

5. Name some sculptures of people who are really skilled at carrying things, for 10 points each.

[10] In a sculpture attributed to Praxiteles, this god held the swaddled infant Dionysus in one of his arms, though those arms are now missing.

ANSWER: **Hermes** [prompt on "Mercury"]

[10] Created by Lee Lawrie, this bronze Art Deco sculpture in front of New York's Rockefeller building shows a giant who holds up a bunch of interlocked circles with both of his arms. Those circles represent the heavens.

ANSWER: **Atlas**

[10] A naked soldier holds one of these people aloft as she screams in a twisty sculpture by Giambologna, found in Florence's Loggia di Lanzi. Nicolas Poussin painted classical buildings behind this group being wronged.

ANSWER: **Sabine women** [prompt on "Sabines" or "women"] <GL>

6. If American drama is to be believed, Southern belles make the worst moms. Answer some questions about the children they scar for life, for 10 points each:

[10] This daughter of Amanda Wingfield is crippled by her limp and by her mother's obsession with "gentleman callers," such as Jim.

ANSWER: **Laura** Wingfield

[10] Laura Wingfield is a character from this author's play *The Glass Menagerie*. He also wrote *Cat on a Hot Tin Roof*.

ANSWER: Thomas Lanier "Tennessee" **Williams** III

[10] In this play by Lillian Hellman, Alexandra realizes that her mom, Regina Hubbard, is a mean "eater of the earth" who lets her husband die by denying him heart medication.

ANSWER: *The **Little Foxes*** <GL>

7. Answer the following about the distinctive apparel of people involved in an ongoing conflict, for 10 points each.

[10] Rebel fighters in this country's Nuer White Army smear white ash on themselves. This Dinka-led country recently sparked a civil war which mediation efforts by nearby Ethiopia, Kenya, and Uganda haven't stopped.

ANSWER: Republic of **South Sudan** [do NOT accept or prompt on "Sudan" nor "Republic of the Sudan"]

[10] This international organization doubled its number of peacekeeping forces in South Sudan, recognizable by their sky-blue helmets, after a December Security Council vote.

ANSWER: **United Nations** [or **UN**; or **United Nations** Mission in South Sudan; or **UNMISS**]

[10] This Dinka president of South Sudan, known for his trademark black cowboy hat, accused his former vice president, Riek Machar, of being involved in a failed coup, triggering the civil war.

ANSWER: Salva **Kiir** Mayardit <JW>

8. This legal practice was attempted in response to the Tariff of Abominations of 1828 and the successive Tariff of 1832. For 10 points each:

[10] Name this constitutionally-dubious action by which a state declares laws passed by the U.S. Congress unconstitutional. Its precursors include the idea of "interposition."

ANSWER: **nullification** [or **nullify**ing a law]

[10] This state passed the Ordinance of Nullification in November of 1832. One of the main proponents of nullification, then-vice president John C. Calhoun, hailed from this state.

ANSWER: **South Carolina**

[10] In response, the U.S. Congress passed this law which gave President Andrew Jackson the authority to use the U.S. army to ensure the collection of imports. South Carolina also tried to nullify this legislation.

ANSWER: **Force** Bill [or An Act **Further to Provide for the Collection of Duties on Imports**] <MW>

9. This financial resource was briefly valued at over 1000 dollars per unit in 2013, and transactions of it are recorded on a "blockchain." For 10 points each:

[10] Name this alternative currency traded over the Internet, which is stored in online wallets. It inspired the satirical spinoffs Dogecoin and Coinye.

ANSWER: **Bitcoin**

[10] This process creates bitcoins. In this process, users donate their computing power to solve "blocks," which dispense Bitcoins when completed.

ANSWER: **mining** [accept word forms]

[10] This name of Bitcoin's creator was thought to be a pseudonym until March 2014, when *Newsweek* revealed it to be the real name of a 64-year-old Japanese-American hiding in plain sight in Temple City, California.

ANSWER: Satoshi **Nakamoto** <EB>

10. Lab safety is important. For 10 points each:

[10] These documents include detailed information about the hazards associated with a given chemical. They often include data about NFPA diamond ratings and first aid measures.

ANSWER: material **safety data** sheets [or **MSDS**]

[10] One important piece of information found in MSDSes is this value, the lowest temperature at which a liquid's vapors can catch fire. It typically lies far below the autoignition point.

ANSWER: **flash** point

[10] If you, like Carol, fail to wear your safety goggles, you might find yourself in need of this piece of lab safety equipment, which pelts your eyes with water to remove hazardous chemicals.

ANSWER: **eyewash** station <AS>

11. In this novel, Horacio Oliveira and La Maga often meet with the members of "The Serpent Club." For 10 points each:

[10] Name this novel by Julio Cortázar with 99 "expendable" chapters. Its chapters can be read in any order.

ANSWER: **Hopscotch** [or **Rayuela**]

[10] Cortázar is from this country. José Hernández's long poem *Martín Fierro* is about one of this country's cowboy-like gauchos.

ANSWER: República **Argentina** [or **Argentine** Republic]

[10] This Argentine short story author included a story where Captain Richard Madden arrests the German spy Dr. Yu Tsun, "The Garden of Forking Paths," in his *Ficciones*.

ANSWER: Jorge Francisco Isidoro Luis **Borges** <JR>

12. [NOTE TO MODERATOR: Do NOT reveal alternate answer lines to the first bonus part unless given by the team.]

This Pope made his son Cesare a cardinal, but his son later resigned that office. For 10 points each:

[10] Name this rival of future pope Julius II, who divided the New World between Spain and Portugal after his election in 1492.

ANSWER: **Alexander VI** [or **Rodrigo Borgia**, or Rodrigo **Lanzol** Borgia; or Roderic **Llançol** i de Borja; accept any previous underlined part; prompt on "Alexander"]

[10] Alexander VI was part of this infamous Spanish-Italian family. Other members of this family included the rumoured poisoner Lucrezia.

ANSWER: **Borgia** [accept Lucrezia **Borgia**]

[10] A French king of this name, nicknamed "the Affable," invaded Italy during Alexander VI's papacy. Another king of this name won the Hundred Years' War against Britain.

ANSWER: **Charles** [accept **Charles** VIII or **Charles** VII] <JR>

13. Lists with this property are amenable to random access. For 10 points each:

[10] Name this property that a list must possess if you wish to search it using binary search.

ANSWER: **sorted** [or the list is **in order**; or obvious equivalents]

[10] Suppose that you have a sorted list of 16 elements. What is the maximum number of iterations binary search will take to find an element in the list?

ANSWER: **four**

[10] The result of the previous part is a consequence of the fact that the time complexity of binary search grows like this function of the input size. This function is the inverse of the exponential function.

ANSWER: **logarithm** [accept natural **logarithm**; accept **logarithm** base anything] <AS>

14. This man tied himself to a stone in order to die standing up, and his death was confirmed when a raven landed on his shoulder. For 10 points each:

[10] Name this mythical hero, who defeated the forces of Queen Medb ("METHV") of Connacht ("kun-NAWT") during the Cattle Raid of Cooley. He was known for his terrible battle frenzy, the *ríastrad*.

ANSWER: **Cú Chulainn** [or **Cuhullin**; or **Sétanta**]

[10] Cu Chulainn is a hero from this ethnicity's Ulster cycle. A hero who sleeps under the land of this people is Finn mac Cool.

ANSWER: **Irish** mythology [or people of **Ireland**; prompt on "Celtic" or "Gaelic"]

[10] This magical multi-barbed spear, made from the bones of a sea monster, was wielded by Cu Chulainn after the warrior woman Scáthach taught him how to wield it.

ANSWER: **Gáe Bulga** <MW>

15. Josquin des Prez used a variant of this text containing the words "Virgo serena" for one of his motets, and the best-known work of Franz Biebl is a setting of this text. For 10 points each:

[10] Name this Latin prayer to the mother of Jesus. Charles Gounod used the first prelude from Bach's *Well-Tempered Clavier* as the basis for his version.

ANSWER: **"Ave Maria"** [prompt on "Hail Mary"]

[10] This Austrian composer's "Ave Maria" is actually a setting of a text from Sir Walter Scott's *The Lady of the Lake*. He also wrote the "Death and the Maiden" quartet and an "Unfinished" symphony.

ANSWER: Franz Peter **Schubert**

[10] This other Austrian wrote three settings of the "Ave Maria," but he is better known for his symphonies, including a seventh whose slow movement contains a cymbal clash supposedly inspired by the death of Richard Wagner.

ANSWER: Anton **Bruckner** <KK>

16. This man argued for metal currency in his *The High Price of Bullion*, and proposed that the Corn Laws were resulting in higher economic rent. For 10 points each:

[10] Name this British economist whose namesake equivalence proposes that consumers anticipate future spending the same way regardless of how the government finances itself.

ANSWER: David **Ricardo**

[10] Ricardo proposed this theory that workers get paid less as more of them are born, making life less livable, making them starve, leaving fewer workers, who can be paid more and have more kids, repeating the cycle.

ANSWER: the **iron law of wages**

[10] Ricardo also developed this concept which states that when one group can produce a good at lower opportunity cost, it should do so even if the other group is more absolutely efficient.

ANSWER: law of **comparative advantage** <NW>

17. Adipose tissues develop from this layer of the gastrula. For 10 points each:

[10] Name this germ layer responsible for the formation of blood vessels and muscles, as well as mesenchyme and coelomocytes. It is absent in diploblasts.

ANSWER: **mesoderm**

[10] Though most nervous system elements derive from the ectoderm, this structure, which is ventral to the dorsal hollow nerve chord in chordate embryos, comes from the mesoderm.

ANSWER: **notochord**

[10] Organisms in this phylum lack a mesoderm, instead possessing a jelly-like layer called mesoglea. Their lifecycles typically include a polyp stage and a medusa stage. Jellyfish and anemones are in this phylum.

ANSWER: **Cnidaria** [or **cnidarians**] <GL>

18. This man wrote that "A little learning is a dangerous thing" in his *Essay on Criticism*. For 10 points each:

[10] Name this 18th-century English poet who satirized epic poetry in a poem about a snipping of Belinda's hair called *The Rape of the Lock*.

ANSWER: Alexander **Pope**

[10] Besides *Essay on Criticism*, Pope wrote an *Essay on* this singular creature, which he called the "glory, jest, and riddle of the world." Hamlet exclaims: "What a piece of work is [this creature]!"

ANSWER: **man** [or **Essay on Man**; do NOT accept synonyms]

[10] In *An Essay On Man*, Pope says that "Hope springs eternal" in this part of the human body. Keats envisioned himself upon the "ripening" one of these of his "fair love."

ANSWER: the human **breast** <JR>

19. The solitary title figure of this painting carries a walking stick while looking out over a craggy landscape. For 10 points each:

[10] Name this painting, whose obscured landscape of rocks and trees is looked out upon by a man with his back to the viewer.

ANSWER: **Wanderer above the Sea of Fog** [or *Der Wanderer über dem Nebelmeer*; or **Wanderer above the Mist**; accept translations that substitute "over" for "above" and/or "mist" for "fog"]

[10] This German Romantic painter of *The Cross in the Mountains* created *Wanderer above the Sea of Fog*.

ANSWER: Caspar David **Friedrich**

[10] Friedrich also depicted a *Sea of* this solid with a ship stuck in the middle. Leutze's *Washington Crossing the Delaware* features large quantities of this substance.

ANSWER: **ice** [or *The Sea of Ice*; or *Das Eismeer*] <JR>

20. Answer these questions about contributors to the history of science in early modern England, for 10 points each.

[10] Based in London, this group of scientists and researchers became dominant in the 1660s. Its presidents included Isaac Newton and Humphrey Davy, and it's affiliated with a Greenwich observatory.

ANSWER: **Royal Society** of London for Improving Natural Knowledge

[10] This Royal Society scientist was undercut often during his rival Newton's presidency. This coiner of the term "cell" was the first to view plant cell walls under a microscope.

ANSWER: Robert **Hooke**

[10] This man was President of the Royal Society when Newton's *Principia* was published. He wrote in graphic detail about his own life and romantic affairs in many volumes of shorthand.

ANSWER: Samuel **Pepys** ("PEEPS") <MJ>

21. Answer these questions about the original versions of fairy tales which have been sanitized over the years, for 10 points each.

[10] In a much more believable original version of this girl's story, she gets torn apart and eaten by the family whose house she trespasses on. She is a serial eater of porridge.

ANSWER: **Goldilocks**

[10] These linguists gathered several Germanic fairy tales by wandering the country at the start of the nineteenth century, including "Rapunzel."

ANSWER: The Brothers **Grimm** [or Jacob and Wilhelm **Grimm**]

[10] Instead of vanishing into thin air when a woman guesses his name, this fairy tale villain commits suicide by pulling off his own legs in the Grimm version.

ANSWER: **Rumplestiltskin** <ATa>