

PACE NSC 2022 - Round 20 - Tossups

1. In this city, a trendy way of speaking called Cheli emerged following a 1980 punk concert. A year later, the TVE network broadcasted the first 30 minutes of a seizure of the Congress of Deputies in this city. In March 2004, four trains in this city were bombed in the 11M terrorist attack. A Neo-Herrerian basilica in the suburbs of this city was built with forced labor and served as a tomb for a general whose crimes were covered by the (*) Pact of Forgetting. A 2001 car bombing in this national capital was orchestrated by the separatist ETA group. The controversial Valley of the Fallen outside of this city was built by the dictatorial leader of the Falange party. For 10 points, name this capital from which Francisco Franco ruled postwar Spain.

ANSWER: Madrid

<Michael Bentley, History - European - 1900+> ~24012~

2. Tools like Hibernate can define schemas for these entities so that they map directly to a Java bean. The cost of building an index for these entities can be lowered by sharding, which partitions them horizontally. Transactions on these entities will fail rather than violate constraints in systems that satisfy the ACID properties. It is customary to include an "if exists" clause before (*) dropping these entities.

These entities reference each other with foreign keys, which can be used to perform an inner join of their contents. In the relational model, users can select records from these entities using a query language like SQL ("sequel"). For 10 points, name these components of a database which consist of columns and rows.

ANSWER: database tables [or data tables; accept data frames; accept relations before "relational"; prompt on relational databases or DBs]

<Kevin Wang, Science - Computer Science> ~24138~

3. In a story by this author, a beggar sells a Chaim ("kye-EEM") Soutine painting tattooed on his back. A cadet bets that his finger can be cut off if his lighter doesn't ignite ten times in a row in this author's story "Man from the South." A story by this author ends with policemen eating a leg of lamb, destroying the evidence that Mary Maloney used it to kill her husband. This author of (*) "Lamb to the Slaughter" wrote a novel whose title characters plot to use Formula 86 to turn all English children into mice. One of this author's title characters rides the Great Glass Elevator back to the Bucket family after touring the title building with his Grandpa Joe. For 10 points, name this author of children's books like *The Witches* and *Charlie and the Chocolate Factory*.

ANSWER: Roald Dahl (the first story is "Skin")

<Joseph Krol, Literature - British - Short Fiction> ~23983~

4. According to Bruce Tremper's book on "Surviving" these events, "pinwheels" and "rollerballs" are signs that one is imminent. The town of Wellington, Washington was renamed after the deadliest one of these events in US history in 1910. The GAZEX system uses explosives to "control" these events and is used by several state transportation departments. Common signs that these events are imminent include a preponderance of depth (*) hoar crystals or the build up of wind slabs on leeward terrain. The path of these events was first simulated in ones named for the large clouds of powder they produce. These events end at a Runout Zone less steep than where they start. For 10 points, name these deadly events characterized by rapid snow movement.

ANSWER: snow avalanches

<Michael Bentley, Other - Other Academic and General Knowledge> ~23392~

5. Lipinski's rule estimates whether a molecule has the appropriate solubility to serve as one of these compounds. These compounds may be glucuronidated or sulfated during phase II metabolism. Multi-compartment models account for the redistribution of these compounds and their accumulation in fatty tissue. These compounds may interact with each other by inhibiting or inducing CYP enzymes. These compounds typically have higher (*) bioavailability when administered parenterally instead of orally due to a lack of hepatic first pass metabolism. The efficacy and safety of these compounds requires phase III clinical trials before they may receive FDA approval. For 10 points, pharmacology studies what compounds used in the treatment of disease?

ANSWER: drugs [or pharmaceuticals or medicines or medications; prompt on xenobiotics]

<Andrew Wang, Science - Chemistry> ~23906~

6. A Givenchy outfit designed for a fictional one of these events kicked off a "ballerina" trend after it was worn to conclude a fashion show by Audrey Hepburn's character in *Funny Face*. John Galliano hand-painted a pink ombre pattern for an outfit used at one of these events by Gwen Stefani. A Balenciaga outfit designed for one of these events was worn by Kim Kardashian for the *Donda* listening party. A 2001 book explored outfits (*) Vera Wang designed for these events. An outfit designed for one of these events by David and Elizabeth Emanuel for Princess Diana required attendants to trail 25-feet behind Diana carrying the train. For 10 points, name these events where white dresses are traditionally worn by brides.

ANSWER: weddings [accept answers like wedding ceremonies or marriages or wedding receptions; prompt on receptions or ceremonies]

<Michael Bentley, Fine Arts - Miscellaneous> ~22826~

7. In the Hopi creation myth, one of these creatures guides humanity through the First, Second, and Third Worlds into the current, Fourth World. Another of these creatures, who violates cultural taboos with actions like marrying his daughter, is the Lakota trickster spirit Iktomi. In a different myth system, one of these creatures makes up an argument with his wife about the length of a (*) snake's body, goading the snake into fully uncoiling. By capturing a jaguar, a group of hornets, and a fairy, that creature of this type obtains the world's stories from the sky god Nyame. This is the form taken by the popular West African trickster god, Anansi. For 10 points, name these creatures also exemplified in mythology by the transformed Arachne.

ANSWER: spiders [or arachnids before "Arachne" is read; accept Spider Grandmother or Spider woman]

<Matthew Bollinger, RMP - World Mythology> ~24151~

8. Two plays by this author, which share the record for the longest-running continuous performance at one theater, have been shown since 1957 at the Huchette ("hoo-SHETT") Theater. A poem in a play by this author describes the "castle" and the "forest" suffering the same fate. In a play by this author, two characters jump out of a tower after the Emperor arrives at an event held by the deaf-mute (*) Orator, for which they rearrange the title objects. Mary claims to be Sherlock Holmes, and a family full of Bobby Watsons is discussed, in a play by this author whose title figure "always wears her hair in the same style." The Fire Chief visits the Smiths and the Martins in a play by – for 10 points – what author of *The Chairs* and *The Bald Soprano*?

ANSWER: Eugène Ionesco [or Eugen Ionescu]

<Michael Bentley, Literature - European - Drama> ~23511~

9. This ruler introduced giraffes to a variant of chess named after him that is played on a 10-by-11 board. A line of poetry which stated that this ruler would sell his capital city for a mole on a Shirazi woman's cheek was written by Hafez. A "curse" named after this ruler was unleashed after Soviet archaeologists unearthed his tomb in 1941. A table of stars known as the (*) *Zij-i-Sultani* was compiled by this ruler's grandson. Europeans praised this ruler for his victory at the Battle of Ankara, after which he took Bayezid the Thunderbolt captive. This ruler led a massacre at Isfahan and created a pyramid out of his victim's skulls. For 10 points, name this ruler who ruled from Samarkand and was nicknamed for his walking disability.

ANSWER: Timur [or Tamerlane; or Tamburlaine; or Timur-i-lang; or Timurlenk; or Timur Gurkani]

<Hari Parameswaran, History - World - Asian> ~23033~

10. A composer from this country formed the "Just Alap Raga" Hindustani classical music ensemble with performance artist Jung Hee Choi and painter Marian Zazeela. That composer from this country, who instructed for a butterfly to be released in the fifth piece of a 1960 musical collection, was mentored by Pandit Pran Nath. Pran Nath also mentored another composer from this country who wrote an aleatoric piece made up of (*) 53 different phrases that can be played in different ways at different performances. A movement from this country is exemplified by works such as *Compositions 1960* and *In C*, which were written by La Monte Young and Terry Riley, respectively. For 10 points, name this country, whose minimalist music movement originally formed in New York.

ANSWER: United States of America [or U.S.A.; or America]

<Wonyoung Jang, Fine Arts - Music - Recent> ~23669~

11. Following a 1967 conference, this author moved to Broadside Press and detailed a political awakening in the memoir *Report from Part One*. The speaker of a poem by this author laments, "A girl gets sick of a rose" and opens, "I've stayed in the front yard all my life." The speaker of another poem by this author claims, "If I poisoned the beginnings of your breaths, / Believe that even in my deliberateness I was not deliberate." The last stanza of that same poem by this author begins, (*) "Believe me, I loved you all." A short poem by this author set "at the Golden Shovel" uses a repeated line break after the word "we" and describes some characters who "Lurk late" and "Die soon." For 10 points, name this African American poet of "the mother" and "We Real Cool."

ANSWER: Gwendolyn Brooks [or Gwendolyn Elizabeth Brooks]

<Michael Bentley, Literature - American> ~23772~

12. David Makinson argued that treating this attitude as closed under conjunction leads to inconsistency in his paradox of the preface. This attitude titles a Saul Kripke paper which imagines Pierre who accepts both "London is not pretty" and "Londres est jolie." The oddity of asserting *P* while denying you have this attitude toward *P* is known as Moore's paradox. The branch of modal logic modeling this attitude is called (*) doxastic logic. Bayesian epistemology treats these attitudes as coming in degrees which are representable as subjective probabilities. Edmund Gettier's namesake "cases" show that a justified true attitude of this kind may fail to constitute knowledge. For 10 points, identify these attitudes we have about what is true.

ANSWER: beliefs

<Anson Berns, RMP - Philosophy> ~23127~

13. Governor Richard Hughes accused an independent representative of this ethnicity of leading "Brown Shirts" during the 1967 Newark race riots. A politician of this ethnicity formed a powerful triumvirate with Averell Harriman and Robert Wagner while serving as Tammany Hall's last director. To weed out corruption, a Jewish mayor of this ethnicity banned artichokes and used a sledgehammer to (*) smash slot machines. A criminal of this ethnicity organized the Havana Conference. A New York City mayor of this ethnicity was nicknamed the "little flower," and it was also the ethnicity of the Five Families he prosecuted. For 10 points, name this ethnicity of "Lucky" Luciano and other members of La Cosa Nostra.

ANSWER: **Italian**-Americans (The first clue refers to Anthony Imperiale. The second clue refers to Carmine DeSapio.)

<Hari Parameswaran, History - American - 1945+> ~23242~

14. The earliest surviving first-person Arabic travelogue is Aḥmad ibn Faḍlān's "Mission" to this river, which inspired Michael Crichton's *Eaters of the Dead*. The first railway bridge across this river was located in Syzran and was dynamited in 1918 by allies of the Czech Legion. One of the 11 reservoirs built to create a "Big" version of this river provides electricity to a nuclear research facility in Dubna. The (*) Valdai Hills provide water for this river. Well into the steam era, timber was still hauled by barge along this river, inspiring a Repin painting. This river's largest left tributary, the Kama, joins it in Tatarstan. This river flows past Kazan and empties into the Caspian. For 10 points, name this longest river in Russia.

ANSWER: **Volga**

<Michael Bentley, Geography - Europe> ~23617~

15. The characteristic alarmone of the starvation-based stringent response contains four of these chemical groups. The V600E mutation of B·RAF causes it to gain function due to mimicking the presence of this group. Cell signal transductions are typically initiated by the addition of this group to a receptor, followed by receptor dimerization, followed by a cascade that adds this group through proteins like MAPK or ones named for (*) Janus. This group is added to proteins at serine, threonine, and tyrosine residues. Proton motive force drives a rotor-shaped protein in adding this group to a molecule. For 10 points, what group do kinases add to molecules by converting ATP to ADP?

ANSWER: **phosphate** group

<Eric Yin, Science - Biology> ~23855~

16. Facilities such as Romemu in Manhattan's Upper West Side have led the way on "b" versions of this ceremony that accommodate gender fluid individuals. They're not weddings, but in some traditions it's common for women and girls to throw candy during these ceremonies. During these ceremonies, participants often give monetary amounts in multiples of 18. The Baruch Sheptarani blessing is said by the (*) father during these ceremonies. In the 19th century, some Reform congregations started replacing this ceremony with a confirmation. A reading of Hafarah during Sabbath Morning Service is typically done during these ceremonies, which are usually followed by elaborate receptions. For 10 points, name these ceremonies where 13-year-old Jewish boys reach adulthood.

ANSWER: **bar mitzvahs** [accept **bat mitzvahs** or **b mitzvahs** or **they mitzvahs**]

<Michael Bentley, RMP - Jewish Practice> ~24206~

17. Prime Minister Matsukata Masayoshi authored a report advising Japan to adopt this system following gains in the First Sino-Japanese War. A 1717 math error by Isaac Newton effectively started this system in Britain. This system was reaffirmed in the "Crime of '73," although pressure from Western farmers carved out an exception with the 1878 Bland-Allison Act. Winston Churchill reimposed this system in 1925 as (*) Chancellor of the Exchequer, a decision that contributed to the Great Depression. Under the Nixon Shock of 1971, the United States ended this system by removing the convertibility in the Bretton Woods system and moving to a fiat currency. For 10 points, name this monetary policy opposed by the Free Silver movement.

ANSWER: gold standard [accept answers like gold exchange standard or gold bullion standard]

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~23087~

18. An artist known as Fillia contributed tips about pulverizing ingredients to this movement's quirky cooking manual. Another artist from this movement wrote about "complete sounds" in his *The Art of Noises*. An early painting from this movement uses "lines of force" to accent men and horses at a construction site. About 15 shoes are visible in a portrait from this movement that also shows multiple views of a (*) dog leash. *The City Rises* is a painting from this movement, whose 1909 manifesto called for glorifying war. An abstract bronze figure steps forward in a sculpture from this movement titled *Unique Forms of Continuity in Space* by Umberto Boccioni. For 10 points, name this Italian art movement that celebrated speed and machinery.

ANSWER: Futurism [accept Italian Futurism or Second Futurist Movement]

<Michael Bentley, Fine Arts - Painting - European> ~23092~

19. Collisions with carbon tetrafluoride slow down these particles when gathering them in buffer-gas traps. In 2013, the Alpha Magnetic Spectrometer observed anomalously high numbers of these particles in cosmic rays. This particle was discovered when, after cosmic rays went through a cloud chamber, a photograph of a lead plate showed a particle losing its radius of curvature as it traveled (*) upwards. This particle was conceived of as a "hole" in the Dirac sea, and was first predicted using negative-energy solutions to the Dirac equation. Beta-plus decay produces a neutrino and this particle, which, like the muon, was discovered by Carl Anderson. Pair production produces electrons along with, for 10 points, what antiparticle of the electron?

ANSWER: positrons [accept antielectrons]

<Benjamin Chapman, Science - Physics> ~23179~

20. The three authors Avram Brankovich, Yusuf Masudi, and Samuel Cohen appear in a novel titled for one of these works which comes in male and female versions. The Serbian author Milorad Pavić ("PAV-itch") wrote that novel titled for one of these works, which is nominally about "the Khazars." Many editions of Gustave Flaubert's ("flow-BEAR'S") *Bouvard et Pécuchet* ("boo-VAR eh PAY-coo-shay") are accompanied by one of these works titled for (*) "Received Ideas." A work of this type sometimes titled for "cynics," which describes love as "a temporary insanity curable by marriage," was begun by its author around the time they wrote "An Occurrence at Owl Creek Bridge." Satirical entries appear in Ambrose Bierce's "devil's" one of – for 10 points – what reference works compiled by Merriam-Webster?

ANSWER: dictionary [or dictionaries or lexicons or word books; accept Dictionary of the Khazars: A Lexicon Novel or Hazarski rečnik or Dictionary of Received Ideas or Dictionary of Accepted Ideas or Le Dictionnaire des idées reçues or The Devil's Dictionary or The Cynic's Word Book]

<Joseph Krol, Literature - World and Miscellaneous> ~23852~

21. The enzyme GOAT adds a fatty acid with this many carbons to ghrelin; that compound is caprylic acid. An antiaromatic compound with this many carbons exists in a tub conformation and sandwiches an actinide in compounds such as uranocene ("you-RAIN-oh-seen"). The solubility of a compound in water versus an alcohol with this many carbons is the standard measure of the partition coefficient. Alkanes with this many carbons serve as a reference for a fuel's ability to undergo compression without detonation; higher values of that (*) "rating" lower the likelihood of knocking. Alkanes with this many carbon atoms have 18 hydrogen atoms, and this is the total number of atoms in ethane. For 10 points, a namesake rule states that valence shells prefer having how many electrons?

ANSWER: eight

<Victor Prieto, Science - Chemistry> ~23067~

PACE NSC 2022 - Round 20 - Bonuses

1. Theaters that mostly produced plays in this language, such as kuttampalams ("cut-am-PALL-ams"), were required to meet standards laid out in the *Natyashastra* ("nat-ya-SHAST-rah"). For 10 points each:

[10] Name this ancient language, also used for epics like the *Ramayana*.

ANSWER: **Sanskrit** [or **sanskritam**]

[10] The *Natyashastra* inspired this Sanskrit writer's plays such as *The Recognition of Shakuntala*, which like many Sanskrit plays opens with a "Benediction upon the Audience."

ANSWER: **Kālidāsa** ("kal-id-AH-sah")

[10] The *Natyashastra* includes "erotic" and "terrible" among this number of sentiments that dramas can express. This was the number of "model plays" that constituted almost all Chinese drama performed during the Cultural Revolution.

ANSWER: **eight**

<Joseph Krol, Literature - World and Miscellaneous> ~18794~

2. This artist used lumps of coal to model rocks for his landscapes and once let a pig loose in his studio to paint *Cottage Girl with Pigs*. For 10 points each:

[10] Name this artist who painted a woman seated on a bench next to her musket-wielding husband, an early adopter of the seed drill in East Anglia.

[10] Name this artist who included a large Pomeranian sheepdog in his portrait of the newlywed Hallett couple.

ANSWER: Thomas **Gainsborough** (the unmentioned painting is *Mr. And Mrs. Andrews*)

[10] Gainsborough's *The Blue Boy* is dressed like one of the "boys" from the paintings of this earlier artist. This Flemish artist painted the King of England beside his horse in a cavalier hat in *Charles I at the Hunt*.

ANSWER: Sir Anthony **van Dyck** [or Antoon **van Dyck**]

[10] X-Rays reveal that one of these animals originally stood at the feet of *The Blue Boy*. One of these pets probably represents fidelity in *The Arnolfini Wedding*.

ANSWER: a **dog** [accept a **spaniel**]

<Michael Bentley, Fine Arts - Painting - European> ~17720~

3. A sliding clamp protein complex enhances the processivity of this process. For 10 points each:

[10] Name this process that occurs in the S phase of the cell cycle; in it a polymerase enzyme copies the genome.

ANSWER: **DNA replication** [or **DNA synthesis**]

[10] Because DNA results in two daughter strands that each contain one of the parent strands, its mechanism is given this name. The Meselson-Stahl experiment determined DNA was replicated in this manner.

ANSWER: **semiconservative** replication [do not accept or prompt on "conservative"]

[10] DNA polymerase production is enhanced by the transcription factor E2F, which is normally repressed by binding this tumor suppressor protein whose hyperphosphorylation yields entry to S phase. Its knockout commonly leads to childhood intraocular cancer.

ANSWER: **retinoblastoma** protein [or **pRb**]

<Andrew Wang, Science - Biology> ~19276~

4. *Fajr*, one of the five mandatory *salat* prayers, is said during this time of day. For 10 points each:

[10] Give this time of day. During one month, the period of *sawm* (“**SAOHM**”) begins following a prayer said at this time of day.

ANSWER: **daybreak** [or **dawn**; or **sunrise**; prompt on **morning**]

[10] The *sawm* fast is observed between daybreak and nightfall during this ninth month in the Islamic calendar, which ends with Eid al-Fitr.

ANSWER: **Ramadan**

[10] To repent for intentionally breaking fast during Ramadan, one may fast for 60 days, feed 60 people, or relieve someone of this status. The scholar Bilali Muhammad had this status, which was also once held by the muezzin Bilal.

ANSWER: being **enslaved** [accept word forms of **slavery**; prompt on answers that indicate being in **bondage** or **servitude** or **imprisonment**]

<Michael Bentley, RMP - Islam> ~18081~

5. Jean Heller was the first to break the story behind the unethical experiments occurring at this university. For 10 points each:

[10] Name this university, which was where 600 African-Americans with syphilis were left untreated to see how it would affect patients.

ANSWER: **Tuskegee** University [or **Tuskegee** Institute]

[10] Heller also revealed that satellite photos had been doctored to justify this conflict. Intervention in this conflict was in part fueled by a 15-year old girl who testified that one side stole over 300 babies from incubators.

ANSWER: Persian **Gulf** War [or First **Gulf** War]

[10] This president formally apologized for the experiments at Tuskegee. This Democrat faced the Monica Lewinsky scandal in the late 1990s.

ANSWER: Bill **Clinton** [or William Jefferson **Clinton**; or William Jefferson **Blythe** III]

<Hari Parameswaran, History - American - 1945+> ~18345~

6. This opera begins with a 136-bar drone that builds up to an E-flat chord, while the cellos play a "Nature" motif. For 10 points each:

[10] Name this Richard Wagner opera, which is the first in a cycle that ends with *Götterdämmerung* (**GER-ter-DAHM-err-oong**) and is played annually at the Bayreuth (**bye-ROYT**) festival.

ANSWER: *Das* **Rheingold** [or *The* **Rhinegold**]

[10] At the end of Scene 2 of Wagner's *Das Rheingold*, eighteen of these instruments tuned to F play a rhythm in 9/8 as the rest of the orchestra drops out to depict Wotan and Loge descending into Nibelheim.

ANSWER: **anvils** [or **amboss**]

[10] Another use of anvils in opera is in the "Anvil Chorus" that appears in Giuseppe Verdi's *Il trovatore*, which was premiered and is often performed in this Italian capital city.

ANSWER: **Rome**

<Benjamin Chapman, Fine Arts - Opera> ~18332~

7. In 2019, Virgin Trains USA opened the first new privately-funded rail in the US in over 100 years. For 10 points each:

[10] The train serves the east coast of this state, with a stop in Fort Lauderdale.

ANSWER: **Florida**

[10] Virgin Trains' next big project is a planned train between Las Vegas and Apple Valley, a community very loosely in the metro area of this major city. This city's Metro Rail system has a stop on Crenshaw Boulevard.

ANSWER: **Los Angeles** [or **LA**]

[10] Existing rail lines will connect Apple Valley to this city in Southern California. This seat of Kern County lends its name to a type of "sound" exemplified by country musicians such as Merle Haggard.

ANSWER: **Bakersfield** [accept **Bakersfield** sound]

<Michael Bentley, Geography - United States> ~18551~

8. A president with this surname passed the Full Stop Law, which granted amnesty to perpetrators of human rights violations. For 10 points each:

[10] Give this surname. Another president with this surname was the target of multiple *cacerolazo* protests after her country's inflation rate shot up to 25%.

ANSWER: **Kirchner** [accept Néstor **Kirchner** or Cristina Fernández de **Kirchner**]

[10] Nestor Kirchner's election in this country is often described as a part of the "pink tide" that swept Latin America. This country was led by Juan Perón.

ANSWER: Republic of **Argentina**

[10] Another president included in the pink tide, Evo Morales, won election by campaigning on the slogan "Yes [this good]" and "No" to a related one. Aymara producers of this good were targeted by Hugo Banzer's government.

ANSWER: **coca** [accept **cocaleros**; do not prompt on or accept "cocaine"]

<Michael Bentley, History - World - Latin American> ~18860~

9. Peter O'Toole's dry reading of this text on public television in 1984 was cut short due to public outcry. For 10 points each:

[10] Name this 1729 text whose narrator ironically regrets that "I have no children by which I can ... get a single penny." This text's narrator has also "been assured by a very knowing American" that a certain food "will equally serve in a fricassee ("fri-kuh-SEE") or a ragout ("RAA-goo")."

ANSWER: "A **Modest Proposal**" [or "A **Modest Proposal** For preventing the Children of Poor People From being a Burthen to Their Parents or Country, and For making them Beneficial to the Publick"]

[10] "A Modest Proposal" was written by this author of *Gulliver's Travels*.

ANSWER: Jonathan **Swift**

[10] "A Modest Proposal" is similar in theme to "A Modest Defense of Publick Stews," a work attributed to this philosopher that calls for legalizing prostitution. This man also wrote *The Fable of the Bees*.

ANSWER: Bernard de **Mandeville**

<Michael Bentley, Literature - British - Other> ~18171~

10. Michael Bratman used a man playing two video games simultaneously to show that the "simple view" of this mental state leads to inconsistency. For 10 points each:

[10] Identify this mental state involved in planning and practical reasoning. It titles a 1957 book by Elizabeth Anscombe that equates it with "acting under a description."

ANSWER: intentions

[10] Bratman's belief-desire-intention model inspired a software architecture in this field whose "strong" version was critiqued in the Chinese Room argument.

ANSWER: artificial intelligence [or AI]

[10] This thinker introduced the term "collective intentionality" in a 1990 paper about group action. This thinker presented the Chinese Room argument in his paper "Minds, Brains, and Programs."

ANSWER: John Searle

<Caleb Kendrick, RMP - Philosophy> ~18984~

11. These values are customarily measured using an instrument either wrapped in a sock or not. For 10 points each:

[10] Name either of these two values plotted against humidity on a psychrometric chart. These values converge to the dew point at 100% humidity.

ANSWER: thermodynamic wet-bulb temperature OR thermodynamic dry-bulb temperature [accept WBT or DBT; prompt on temperature]

[10] Wet-bulb and dry-bulb temperatures are measured simultaneously on a sling psychrometer, which is operated in this unusual fashion. Performing this action quickly equilibrates the thermometers on the psychrometer. A description is acceptable.

ANSWER: whirling it [accept answers indicating the user using their arm to rapidly spin or fling a device on a handle; prompt on waving or other actions which do not incorporate a rotating component]

[10] The wet-bulb temperature reflects the cooling effect of this phase transition. This process occurs below the boiling point as energetic molecules escape the water's surface to become gaseous.

ANSWER: evaporation [prompt on vaporization]

<Kevin Wang, Science - Earth> ~19240~

12. 42 Jews were murdered in this country in 1946 in the Kielce ("KEELT-zuh") pogrom. For 10 points each:

[10] Name this modern-day country home to the Treblinka concentration camp.

ANSWER: Poland [or Republic of Poland; or Rzeczpospolita Polska]

[10] Just after VE day, a nine-year-old Jewish girl in Rzeszow ("REZ-suf") was falsely accused of a modern-day version of a libel named for this substance. Otto von Bismark gave a speech titled for this fluid and iron.

ANSWER: blood [accept "Blood and Iron" or blood libel or blood accusation or the blood of Christian children]

[10] The only American blood libel took place in 1928 in Massena, a rural village in this state. This state's first Jewish governor, Herbert H. Lehman, supervised the "Little New Deal" during the Great Depression.

ANSWER: New York

<Michael Bentley, History - Cross, Historiography, and Miscellaneous> ~18048~

13. Name some animals from Aesop's ("EE-sops") *Fables*, for 10 points each:

[10] One of Aesop's best-known fables describes how one of these "slow and steady" animals wins a race after the overconfident hare takes a rest.

ANSWER: tortoise [or khelone; accept The Tortoise and the Hare]

[10] After one of these animals discovers that he can't reach a high vine on a tree in another fable, he gives up and complains that they aren't ripe rather than admitting defeat, giving rise to the phrase "sour grapes."

ANSWER: fox [or alopex; accept The Fox and the Grapes]

[10] Zeus throws down a log at some of these animals in one fable, after they decide that they desire a king. In a parody of the *Iliad* often attributed to Homer, these animals battle with mice.

ANSWER: frogs [or batrachos; accept The Frogs who Desired a King or The Battle of the Frogs and Mice]

<Joseph Krol, Literature - European - Short Fiction> ~18321~

14. Mantis shrimp can clamp their claws shut so fast that this phenomenon results. For 10 points each:

[10] Name this largely unexplained phenomenon that often occurs alongside cavitation. In it, a bubble collapses and emits visible radiation.

ANSWER: sonoluminescence [accept word forms]

[10] Cavitation generally results because this quantity decreases as pressure decreases. At standard conditions, this quantity for water is about 212 degrees Fahrenheit.

ANSWER: boiling point

[10] Though the direct way cavitation causes sonoluminescence is unclear, many theories ascribe it to this type of radiation that results from the deceleration of a charged particle. Its name is German for "braking radiation."

ANSWER: Bremsstrahlung ("brem-STRAR-lung")

<Joseph Krol, Science - Physics> ~18591~

15. This politician divorced his wife Marcia in order to allow his friend Hortensius to marry her and thus strengthen the bonds between their families. For 10 points each:

[10] Identify this Roman statesman nicknamed The Censor who championed conservative laws such as the Lex Voconia.

ANSWER: Cato the Elder [or Marcus Porcius Cato; or Cato the Wise; or Cato the Ancient; prompt on Cato]

[10] This Greek historian used an analogy about a beautiful sandal to explain Rome's casual attitudes to divorce. This man's best-known book offers biographies of Pyrrhus and Marius.

ANSWER: Plutarch [or Lucius Mestrius Plutarchus]

[10] Divorce worked differently for less-common *sin manus* marriages, which usually resulted from a bride's father not providing a high enough one of these things, the name for a payment made to the groom at the time of marriage.

ANSWER: dowry [or dos; do not accept "bride price"]

<Michael Bentley, History - European - Classical> ~17954~

16. One of the most popular folk songs in this language was prominently sung during a screening of a silent film in 1926 and has over 600 variants. For 10 points each:

[10] Name this language of many folk songs with the refrain, "*Arirang* ("AH-ree-RAHNG"), *arirang*, *arariyo* ("AH-rah-REE-yo")."

ANSWER: Korean [or hanguggeo]

[10] In 2011, the Wooden Fish Ensemble premiered a "Lament" for three of these instruments by Korean composer Young-ja Lee. These instruments are usually made from *kiri* wood and played using three *tsume* or fingerpicks.

ANSWER: koto [or goto; accept gayageum]

[10] Korean classical musician Myung-Wha Chung gained international fame playing this instrument that usually joins a viola and two violins in a string quartet.

ANSWER: cello [or violoncello]

<Michael Bentley, Fine Arts - Music - Miscellaneous> ~18714~

17. Answer the following about depictions of the Arabian peninsula in classical mythology, for 10 points each.

[10] Many sources give Arabia as the home of this mythical bird, which bursts into flame at the end of its lifespan and emerges, reborn, from the ashes.

ANSWER: phoenix [or phoinix]

[10] Pausanias claims that Arabia is home to a brood of these birds, which guarded a namesake swamp by launching metallic, detachable feathers. Heracles used a rattle to frighten these birds before killing them as his Sixth Labor.

ANSWER: Stymphalian birds [or Stymphalides]

[10] According to Ovid, the Arabian Myrrh tree was created when the gods transformed this figure's mother, Myrrha. This man was born as a product of the incest between Myrrha and her father Cinyras.

ANSWER: Adonis

<Matthew Bollinger, RMP - Greco-Roman Mythology> ~19314~

18. In an anthropological "debate" named for this desert, Edwin N. Wilmsen argued that one people have not always been outcast foragers. For 10 points each:

[10] Name this desert. James Suzman wrote a book on the "disappearing world" of the !Kung ("*click-KUNG"), who primarily live at the western border of this desert.

ANSWER: Kalahari Desert

[10] Suzman argued that the !Kung spend far less time engaging in this general practice than people who might engage in the "white collar" or "blue collar" forms of it.

ANSWER: work [accept answers like labor or having a job]

[10] This American anthropologist challenged conventional narratives about work and organization in prehistoric societies in the posthumously published *The Dawn of Everything* and also wrote *Debt: The First 5,000 Years*.

ANSWER: David Graeber [or David Rolfe Graeber]

<Michael Bentley, Social Science - Anthropology> ~18220~

19. In a tongue-in-cheek response to critics of this novel in the July 1899 issue of *Book News*, its author wrote, "I never dreamed of [the protagonist] making such a mess of things." For 10 points each:

[10] Name this novel whose protagonist, in the final chapter, becomes a "new-born creature, opening its eyes in a familiar world that it has never known" while standing naked on a beach.

ANSWER: *The Awakening*

[10] *The Awakening* is a novel by this author of the short story "Désirée's Baby."

ANSWER: Kate Chopin [or Katherine O'Flaherty]

[10] At the end of *The Awakening*, Edna Pontellier drowns herself in this body of water, which is near the Grand Isle resort that much of the novel is set at.

ANSWER: Gulf of Mexico

<Michael Bentley, Literature - American> ~18570~

20. This technique may contain multiple equivalence points when dealing with polyprotic acids. For 10 points each:

[10] Name this technique of determining the concentration of a substance by reacting it with a substance of known concentration.

ANSWER: titration

[10] A form of titration performed in heterogeneous systems identifies the endpoint using this quantity in place of an indicator. This quantity equals the electric potential at the slipping plane.

ANSWER: zeta potential

[10] Another form of titration reacts potassium hydroxide or sodium hydroxide with these compounds to saponify them, which converts them into soaps.

ANSWER: fatty acids [accept lipids or fats or glycerides or triglycerides]

<Andrew Wang, Science - Chemistry> ~19282~

21. A book about this author argues that pre-Reformation societies used laughter and other mechanisms to subvert authority. For 10 points each:

[10] Identify this author whose "World" is addressed in a Mikhail Bakhtin book. One character created by this author is told to "drink, drink" after being born from the ear of his mother.

ANSWER: Francois Rabelais ("RAB-uh-lay")

[10] A friar of this name from Rabelais' *Gargantua and Pantagruel* is rewarded for his military service with the Abbey of Theleme. A "Little" man of this name is the second-in-command of Robin Hood's Merry Men.

ANSWER: John [or Jean; accept Friar John of the Funnels or Little John]

[10] Gargantua floods Paris by urinating from the top of this cathedral. Quasimodo is this cathedral's title "hunchback" in a Victor Hugo novel.

ANSWER: Notre Dame de Paris

<Michael Bentley, Literature - European - Long Fiction> ~18157~