**2021 National All-Star Academic Tournament**

**Round 8 – Tossups**

1. This poet claimed "A society which was really like a poem" would be a "nightmare of horror" while discussing theories of revision in the essay "Squares and Oblongs." The speaker mourns, "The stars are dead. The animals will not look." in one of five poems published with the disclaimer they were "trash" this poet was "ashamed to have written." This poet of "Spain, 1937" laments, "Poetry makes nothing happen" in a poem about a man who "disappeared in the dead of winter." This poet's revisions include editing a line about "little points" into "ironic points of light" and changing the word "or" to "and" in the later-deleted line "We must love one another or die." For 10 points, name this poet who "sits in one of the dives / On Fifty-Second Street" in their poem "September 1, 1939."  
ANSWER: W. H. **Auden** [or Wystan Hugh **Auden**]  
<Literature British - Julia Tong>

2. This leader's inventions include an internal toaster light and a soy sausage during World War One. This leader won one election under the slogan "No Experiments." Menachem Begin organized the delivery of a mail bomb to this leader, but it only killed a bomb disposal expert. An article by Conrad Ahlers on "Fallex 62" led to the arrest of several journalists by this leader's Defense Minister, Franz Josef Strauss. This leader's Himmerod memorandum brought about the formation of the Bundeswehr and the end of denazification. This leader was succeeded by his Minister of Economics, Ludwig Erhard, whose social market economy produced the Miracle on the Rhine. For 10 points, name this first Chancellor of West Germany following World War II.  
ANSWER: Konrad **Adenauer**  
<History European 1914-present - James Stevenson>

3. This composer used the word *legendaire* to mark chromatic descending chords at the opening of a late piano sonata whose themes heavily include minor ninth intervals. The theosophical term "pleroma" describes the tonal center of a piece that this composer premiered with the aid of a Preston Miller invention. After writing a one-movement piano sonata that he feared playing, this composer wrote another sonata as an "exorcism" of that work. A week-long performance in the Himalayas of this composer's magnum opus was intended to bring the end of the world. This composer of the *White* and *Black Mass* sonatas claimed to need the "color organ" to express his synesthesia. For 10 points, name this Russian composer of *Prometheus: The Poem of Fire* and *Mysterium*.  
ANSWER: Alexander **Scriabin** [or Alexander Nikolayevich **Scriabin**]  
<Arts Music - Matt Weiner>

4. High levels of this quantity lead to overproduction of superoxide in endothelial cells, causing increased flux into the hexosamine **(hek-SOS-uh-meen)** and polyol pathways as well as AGE **(A-G-E)** formation. This quantity can be measured colorimetrically from observation of hydrogen peroxide generated by the enzyme GOx. Increases in this quantity in the morning leads to the dawn effect, while its rebound causes the related Somogyi **(sow-MO-gyee)** effect. The three-month average of this quantity can be estimated by measuring hemoglobin A1c levels. High levels of this quantity cause the most common retinopathy in Americans under 75 years old and typically occur concurrently with ketoacidosis. For 10 points, identify this quantity regulated by glucagon and insulin, which is aberrant in diabetes.  
ANSWER: **blood sugar** concentration [or **blood glucose** concentration; or **blood sugar** level; or **blood glucose** level; or **serum glucose**; prompt on answers referring to sugar or glucose concentration that don't specify the blood or serum; prompt on hyperglycemia by asking, "What quantity is being elevated?"]  
<Science Biology - Geoffrey Chen>

5. A 2014 opera titled for a person with this profession centers on the life of Danny Chen and was composed by Huang Ruo. In a different opera, a group of people with this profession sing "Au secours de notre fille" while storming into the wedding of Marie and the Tyrolean Tonio. A character with this profession dances with Margret in a tavern until she notices blood on his hand and elbow. That character stabs his wife Marie under a blood-red moon as revenge for her committing adultery. A character with this profession kills Carmen for choosing Escamillo over him and serves under Zuniga. For 10 points, name this profession of Wozzeck **(VOT-seck)** and Don José, as well as much of the cast of Donizetti's *Daughter of the Regiment*.  
ANSWER: **soldier**s [accept **corporal**; accept *An American* ***Soldier***; prompt on guards]  
<Arts Opera - Noah Sheidlower>

6. In the book of 2 Baruch **("second" Baruch)**, this person is represented by a stream and a vine that destroy a forest. In Samaritan tradition, the Taheb takes the role of this person and retrieves the Ten Commandments from Mt. Gerizim. In the *Mishneh Torah*, Maimonides **(my-mawn-i-dees)** distinguishes between passages referring to this person and those referring to King David. A slogan beginning "yechi" **(YEHK-hee)** is used to identify members of the Chabad **(huh-BAHD)** movement who believe that Menachem Schneerson is this person. Sabbatai Tsvi **(sah-baht-AI t'SVEE)** and Bar Kokhba **(bah KOHK-ba)** both claimed to be this person, who is expected to gather the diaspora. This person is expected to belong to the House of David and will rebuild the temple in Jerusalem. For 10 points, name this long awaited savior of the Jewish people, whom Christians believe was Jesus.  
ANSWER: the **Messiah** [or **Moshiach**; do not accept or prompt on "Jesus" or "Christ"]  
<RMP Non-Christian/Bible Religion - Bradley McLain>

7. In a retelling of this short story, a man draws a woman he meets on a beach with his blind son. That retelling of this story changes its setting to Nantucket and is by Joyce Carol Oates. A man in this story is infuriated when a friend who plays cards with him says, "the sturgeon was just a little off." This story ends with the realization "the hardest, the most complicated part was only just beginning." A woman in this story loses her lorgnette while waiting for a steamer with her lover, who considers women "the lower race." The protagonist of this story goes to a performance of *The Geisha* to find a lover he had met in Yalta named Anna. For 10 points, name this short story titled for a lover of Dmitri Gurov with a white pomeranian, written by Anton Chekhov.  
ANSWER: "The **Lady with the Dog**" [accept anything mentioning a **lady** and a **dog**; accept "The **Lady with the Little Dog**" or "The **Lady with the Lapdog**"; accept "**Dama s sobachkoy**"]  
<Literature European - Caroline Mao>

8. A historian of this ethnicity wrote an autobiography titled "Waiting For Snow" in a certain city. Economists David Card and George Borjas did competing studies concerning members of this ethnicity. Father Bryan Walsh and James Baker brought thousands of children of this ethnicity to America in Operation Peter Pan. Fishing boats called *yolas* were used by immigrants of this ethnicity to circumvent the "wet feet, dry feet" policy. In a 2000 photo, Jim Goldman points a submachine gun at a child of this ethnicity in a closet who was later deported by Janet Reno. Members of this ethnicity arrived during the Mariel boatlift. Elián González is a member of, for 10 points, what ethnicity centered around Miami, many of whom fled the Castro regime?  
ANSWER: **Cuban**-Americans  
<History American (1945-present) - Ganon Evans>

9. Robert Merton's namesake problem presents the task of finding one of these things that maximizes expected utility as a continuous-time stochastic control problem. A popular theory of these things contends that agents will only choose them from an efficient frontier consisting of those that are not mean-variance dominated. That so-called "modern" theory of these things was developed by Harry Markowitz. The existence of one that is delta neutral is a key result in the Black-Scholes **("black" SKOLZ)** model. A common risk-management strategy involves adding put options to these things, whose risk can also be managed by holding a wide array of assets to create one that is "diversified." For 10 points, name these collections of financial assets.  
ANSWER: **portfolio**s [accept stock **portfolios**]  
<Social Science Economics - Caleb Kendrick>

10. Quarks violate chiral symmetry and form these states at ultra-high densities in color-flavoring locking. Certain materials are classified as s-wave, p-wave, or d-wave based on the symmetries of the collective wavefunction of these states in momentum space. These states form due to instabilities in an attractive interaction potential near the Fermi surface. These states were evidenced by an inversely proportional relationship between isotope mass and transition temperature, termed the isotope effect. In order to form superfluids, helium-3 atoms must organize into these bosonic states. At low temperatures, electron-phonon interactions cause electron pairs to condense and form these states according to BCS theory. For 10 points, name these bound states responsible for superconductivity.  
ANSWER: **Cooper pair**s [accept **BCS pair**s before "BCS" is read; prompt on bound states or bosonic states before they are read; prompt on superconductors or superconducting states before "superconductivity"; prompt on superfluid before “superfluids;” prompt on insulators by asking “formation of what states cause them to become an insulator?”]  
<Science Physics - Geoffrey Chen>

11. The earliest usage of this good dates to 4500 BC based on samples in the Gerani Cave near Rethymno. Pliny the Elder frequently ranted against harvesting this good via beating rods. An item strongly associated with this good gave its name to a literary meter that arises after an iambic trimeter has a caesura before the last line. The first financial options and futures were created to manage the world's first known monopoly, which was held over this good by Thales of Miletus. Strigils were metal tools used to scrape this good, which was crushed using an iron pivot called a columella. Winning athletes at the Panathenaic games were paid in this good, usage of which to cover the body during wrestling continues in Turkey today. For 10 points, name this central ancient Athenian export along with wine.  
ANSWER: **olive oil** [prompt on olives with "What form are the olives in?"; prompt on oil with "Oil of what substance?"]  
<History European to 1400 - Ganon Evans>

12. A character in this novel urinates on himself in an alley after finding his father playing a dice game. While burying a pair of pants soiled by a girl's first period, a character in this novel catches Rosemary spying on her from the bushes. A man in this novel marries Velma at age seventeen, but she leaves him two months later. After throwing a black cat against the window, a boy blames its death on this novel's protagonist in front of his mother Geraldine. Marigolds fail to grow in the beginning of this novel, which is interspersed with excerpts from the Dick and Jane readers. Cholly rapes his daughter in this novel narrated by Claudia MacTeer. For 10 points, name this novel about Pecola Breedlove's desire for the title facial feature, written by Toni Morrison.  
ANSWER: *The* ***Bluest Eye***  
<Literature American - Caroline Mao>

13. These numbers mod p give nontrivial results when inputted into the Cipolla and Tonelli-Shanks algorithms. Degen **(DAYG-en)** proved an identity named for eight of these numbers. Whether a number is congruent mod p to a number with this property determines its Legendre **(LEH-zhan-dreh)** symbol. Only numbers with a property partially named for these numbers give nonzero outputs for the Mobius function. Primes of the form "4*n*+1" are the sum of two of these numbers, though all positive integers are the sum of four of them by a theorem proved by Lagrange. Euler **(OY-lur)** found the sum of the reciprocals of these numbers, solving the Basel **(BAA-zul)** problem. Summing the first n odd numbers gives, for 10 points, what type of number obtained by multiplying an integer by itself?  
ANSWER: **square** numbers [or **quadratic** residues; or perfect **square**s; or **square**free numbers]  
<Science Math - Joseph Krol>

14. While serving as a Jesuit missionary in this country, Pedro Páez wrote an extensive history of it and convinced its king Za Dengel to convert to Christianity. A buffalo led this country's king Fasilides to the spot where he would construct his new mountaintop capital of Gondar. At the Battle of Wofla, Portuguese soldiers under Cristóvão da Gama assisted this country in resisting the forces of the Adal Sultanate. This country experienced a civil war after its king Susenyos I supported Roman Catholicism over its namesake Orthodox Church. Many Europeans equated this country's king with the mythical Prester John. For 10 points, name this country which was ruled by the Solomonic Dynasty and was where the Christian Kingdom of Axum flourished.  
ANSWER: **Ethiopia** [or **Abyssinia**]  
<History World - Hari Parameswaran>

15. An artist with this first name painted a black cloud moving towards a lone cactus in *Mama, Papa is Wounded!* The 2012 "Double Solitaire" exhibition examined works by Kay Sage and that surrealist with this first name, her husband. An artist with this first name was photographed jumping off of a roof in *Leap into the Void*. An artist with this first name created a series of *Anthropometries*, in which women would roll around on the canvas covered in his signature ultramarine paint. A fashion designer with this first name created Mondrian-inspired dresses and the "Le Smoking" female tuxedo. For 10 points, give this first name of an artist surnamed Tanguy, the creator of the International Klein Blue shade, and of an Algerian designer surnamed Saint-Laurent **(san luh-ron)**.  
ANSWER: **Yves** [accept **Yves** Klein or **Yves** Tanguy or **Yves** Saint-Laurent]  
<Arts Painting - Hari Parameswaran>

16. In 1964, a scientist with this surname added an organolithium reagent across a carbonyl **(car-buh-NEEL)** ligand and discovered a class of compounds which retain the carbonyl's electrophilic carbon through pi-backbonding. Cobaltocene was discovered by a scientist with this surname, who independently determined the structure of sandwich compounds and names the counterpart to Schrock carbenes **(car-BEENZ)**. A pyrrole **(pi-ROHL)** is attached to a benzene in the final step of the indole synthesis of a scientist with this surname, who developed a namesake projection for sugars and a reaction which may take hours of refluxing to finish reacting the carboxylic acid with the alcohol. For 10 points, give this surname of several German scientists, including the Nobel-winning namesake of an esterification.  
ANSWER: **Fischer** [accept Ernst Otto **Fischer** or (Hermann) Emil (Louis) **Fischer**; accept **Fischer** carbenes, **Fischer** indole synthesis, or **Fischer** esterification]  
<Science Chemistry - Vishwa Shanmugam>

17. In a 1970 article partially titled for this thinker, David Lewis argued that one of his arguments is invalid because actuality is indexical. In a work framed as a dialogue with his student Boso, this thinker criticized the dominant ransom theory of atonement, arguing instead that Christ's crucifixion was necessary to bring "satisfaction" to God. This thinker, who described his philosophical project as "faith seeking understanding," wrote his best-known book to persuade the Fool of the *Psalms*. That book contains an argument which Guanilo used to prove the existence of a "Lost Island." That argument by this thinker purports to show that the greatest being which we can conceive must actually exist. For 10 points, name this philosopher whose *Proslogion* contains his ontological argument.  
ANSWER: St. **Anselm** of Canterbury   
<RMP Philosophy/Thought - Caleb Kendrick>

18. "A shaky cradle-song welled up" in one of this poet's speakers as they care for "The Baby Left Alone" in a poem dedicated to Sara Hübner. This poet imagines a woman "who has come so far that only the dead have gone further" while awaiting her sailor husband's return. Langston Hughes translated a collection by this poet which repeatedly invokes the imagery of "how beloved is the rose, / and what a lover, the thorn." This poet of "To See Him Again" praises the "shadow of God over the Universe" and declares "You shall love beauty" in "Decalogue of the Artist." The death of this poet's lover Romelio Ureta inspired a three-part poem cycle which states, "I will lower you to the humble and sunny ground." For 10 points, name this Chilean poet of *Desolación* **(day-soh-lah-see-OWN)** and *Sonnets of Death.*  
ANSWER: Gabriela **Mistral** [or Lucila Godoy **Alcayaga**]  
<Literature World / Classical / Misc - Ganon Evans>

19. In the book *Ninety Percent of Everything*, Rose George nicknames this place after Marlboro cigarettes due to their usage as bribes here. A French utilities company named after this location is the largest private supplier of water in the world. The planned solar city of New Ismaila was part of a 2015 expansion of this location which included the 3rd of July tunnels underneath it. Shoei Kisen Kaisha **(SHOW-ee KIE-sen KIE-shuh)** argued for a "general average" of damages in a lawsuit over actions at this location falsely blamed on Marwa Elselehdar **(MAHR-wuh el-SLAY-dahr)**. Osama Rabie estimated an incident caused by sandstorm winds at this location cost $6.7 million a minute in suspended global trade. In March 2021, the tugboat *Mashhour* freed the cargo ship *Ever Given* from blocking, for 10 points, what Egyptian canal?  
ANSWER: **Suez** Canal [accept the Isthmus of **Suez**; accept Qānat al **Suwais**]  
<Other Academic - Ganon Evans>

20. Maurice and Robert Burton curbed public interest in this creature through a series of *New Science* articles. Ken Wallis designed an autogyro **(aw-toh-jie-roh)** to assist Tim Dinsdale in his studies of this creature. F.W. Holiday postulated that medieval dragon myths were based on massive worms after studying the Morag and this creature. Marmaduke Wetherell created alleged footprints of this creature with a hippopotamus foot attached to an umbrella stand. St. Columba pacified this creature from eating Pictish people. Robert Kenneth Wilson's "surgeon's photograph" depicts this creature, but in actuality is most likely a toy submarine with a wood putty neck. For 10 points, name this plesiosaur **(plee-zee-oh-soor)** cryptid which resides in a Scottish lake.  
ANSWER: the **Loch Ness** Monster [or **Nessie**]  
<RMP Non-Greek/Roman Myth - Ganon Evans>

21. During a 1934 election for this office, the loser was smeared as a communist by the U.S.'s first political consultancy firm, Campaigns, Inc., which he dubbed "The Lie Factory" in a memoir subtitled "How I Got Licked." Despite losing popularity after the National Guard massacred striking longshoremen on "Bloody Sunday," Frank Merriam managed to win reelection to this office, defeating a novelist who ran on a platform abbreviated EPIC. Upton Sinclair unsuccessfully ran for this office, which Earl Warren held for most of the 1940s. After losing this office to Pat Brown in a 1962 race, the loser told the press "you don't have Nixon to kick around any more." For 10 points, identify this statewide office held by Ronald Reagan.  
ANSWER: **Governor of California** [prompt on governor]  
<History American (1945-present) - Caleb Kendrick>

**2021 National All-Star Academic Tournament**

**Round 8 – Bonuses**

1. Reintroduction of a type of these cells into the body can induce a neuropsychiatric condition called ICANS. For 10 points each,  
[10] Name these cells that are modified with chimeric antigen receptors and reintroduced to the body in a common adoptive cell therapy that prefixes their name with "CAR."  
ANSWER: **T**-cells [accept chimeric antigen receptor **T**-cells or CAR **T**-cells or CD8+ **T**-cells or CD4+ **T**-cells or cytotoxic **T**-cells or helper **T** -cells; accept answers replacing cells with **lymphocyte**s]   
[10] Side effects of CAR T-cell therapy frequently include cytokine release syndrome, which has this designation because it stems from intended interactions, and is thus expected in patients. The **(emphasize)** opposite of this hyphenated term describes side effects of CRISPR **(KRIS-per)** that cause mutations at unintended sites.  
ANSWER: **on-target** effects (Those CRISPR side effects are referred to as "off-target")  
[10] The first CAR T-cell therapy was approved to treat the acute lymphoblastic form of this condition, a cancer of the bone marrow that affects white blood cell production.  
ANSWER: **leukemia** [accept acute lymphoblastic **leukemia**]  
<Science Biology - Vishwa Shanmugam>

2. This giant was worshipped as the patron god of Panopeus **(pan-oh-pee-us)**, which set up a shrine to this giant and his mother Elara in a cave. For 10 points each:  
[10] Name this son of Zeus who is killed by Apollo and Artemis during an attempted rape of Leto.  
ANSWER: **Tityos**  
[10] Apollo and Artemis also protected Leto's honor from Niobe **(nie-oh-bee)**, who watched all fourteen of her children killed by arrows and then was turned into this substance.  
ANSWER: **stone** [or **rock**; or a **mountain**]  
[10] Two of these creatures tormented Tityos **(tit-ee-ohs)** in Tartarus. Either this bird or an eagle inflicted a similar punishment on Prometheus.  
ANSWER: **vulture**s  
<RMP Greek/Roman Myth - Matt Weiner>

3. An author with this surname published the Modernist poetry collection *The Hallucinated City* and created a shapeshifting trickster of the Tapanhumas tribe. For 10 points each:  
[10] Give this surname of Mário, the author of *Macunaíma* **(ma-koo-na-EE-muh)**. Another Group of Five member with this surname wrote "Tupi or not Tupi" in the *Anthropophagic Manifesto*.  
ANSWER: de **Andrade** **(jee on-DRAH-jee)** [accept Mário de **Andrade** or Oswald de **Andrade**]  
[10] *Macunaíma* opens with the title character's birth in a "virgin" one of these places. A Horacio Quiroga **(oh-RAHSS-yo kee-ROH-ga)** book named for these places was inspired by a similarly titled Kipling book about Mowgli's life in one of these places.  
ANSWER: **jungle**s [accept **selva**s; accept ***Jungle Tales*** or *The* ***Jungle Book***]  
[10] The "Letter to the Icamiabas" section of *Macunaíma* was inspired by the first-person narrated Cantos III and IV of this epic poem about the voyages of Vasco da Gama.  
ANSWER: *The* ***Lusiads*** [accept *Os* ***Lusíadas***]  
<Literature World / Classical / Misc - Ganon Evans>

4. The majority opinion of a 1964 Supreme Court case brought by Cocheyse Griffin against Prince Edward County, Virginia stated that "the time for" this phrase "has run out". For 10 points each:  
[10] Give this phrase. The ambiguity of this phrase, which appeared in a 1955 Supreme Court opinion, allowed states such as Virginia to pursue policies of "massive resistance" for several years.  
ANSWER: with **all deliberate speed** [prompt on partial answer]   
[10] The phrase "with all deliberate speed" appeared in the Supreme Court's decision over a follow-up suit to this case. This case overturned *Plessy v. Ferguson* and found school segregation unconstitutional.   
ANSWER: ***Brown*** *v.* ***Board*** *of Education of Topeka*  
[10] The 1948 case *Morgan v. Virginia* earlier outlawed segregation in some of these places. The segregation of these places was fully ruled unconstitutional in the case *Browder v. Gayle*.  
ANSWER: **bus**es [prompt on transport]  
<History American (1945-present) - Joseph Krol>

5. Although he rejected the label, the anthropologist Alfred Radcliffe-Brown is often considered to be the originator of this approach. For 10 points each:  
[10] Name this approach to social structure that considers society to be composed of self-perpetuating social institutions that maintain cohesion.  
ANSWER: structural **functionalism**  
[10] In *Why Nations Fail*, Daron Acemoglu **(ah-SUH-moe-"GLUE")** and James Robinson use this adjective to refer to social institutions that concentrate power within a group of elite few, causing poor economic growth.  
ANSWER: **extractive** institutions  
[10] *Why Nations Fail* uses the growth experienced by this country under Deng Xiaoping's **(DUNG shao-PENGZ)** reform and opening-up policies as an example of their thesis that inclusive institutions lead to economic prosperity.  
ANSWER: **China** [or the People's Republic of **China**; or **PRC**]  
<Social Science Sociology - Geoffrey Chen>

6. A line from this song was changed from "a cigarette, a guitar" to "a little nook, a guitar" for the album *O amor, o sorriso e a flor*. For 10 points each:  
[10] Name this bossa nova standard whose opening lines Gene Lees translated as "quiet nights of quiet stars." This song appears after "Desafinado" **(days-ah-fee-NAH-doo)** on *Getz/Gilberto* **(jeel-BAIR-to)**.  
ANSWER: "**Corcovado**" [accept "**Quiet Nights of Quiet Stars**" before mention]  
[10] This composer of "Corcovado" played piano on, and wrote many of the songs for, *Getz/Gilberto*. This composer's tunes "Desafinado" and "Chega de Saudade" **(sau-DAH-jee)** are both contenders for the first bossa nova song.  
ANSWER: Antônio Carlos **Jobim** **(jo-BEEM)** [or Tom **Jobim**]  
[10] This American crooner claimed he hadn't "sung so soft since I had laryngitis" during a 1967 bossa nova collaboration with Jobim. Count Basie's Orchestra accompanied this singer's 1964 version of "Fly Me to the Moon."   
ANSWER: Frank **Sinatra** [or Francis Albert **Sinatra**]  
<Arts Jazz - Ganon Evans>

7. Answer these questions about rampant crime in Glasgow in the 20th century. For 10 points each:  
[10] These turf wars pitted Thomas Campbell against the Marchetti brothers and resulted in Campbell's arrest for the murder of "Fat Boy" Doyle. Its name comes from the vehicles used by Campbell to sell drugs.  
ANSWER: **Ice Cream** Wars  
[10] The Norman Conks often clashed with a razor gang named after this person's "Boys" in 1920s and 30s Glasgow. This is the first word in the nickname of a criminal who was arrested for the murder of William J. Brady during the Lincoln County War.  
ANSWER: **Billy** [accept The **Billy** Boys or "**Billy** the Kid"]  
[10] Bill Campbell, who orchestrated the 1979 bombings of two pubs in Glasgow, may have also orchestrated the 1971 bombing of McGurk's pub in this constituent country of the United Kingdom where the Troubles took place.  
ANSWER: **Northern Ireland**  
<History European 1914-present - Hari Parameswaran>

8. In a story by this author, the dying narrator sees the troubled childhood of Samuel, who had just killed him. For 10 points each:  
[10] Name this author of "CivilWarLand in Bad Decline," who wrote about Willie Lincoln's afterlife in the novel *Lincoln in the Bardo.*  
ANSWER: George **Saunders**  
[10] This collection contains Saunders's stories "Victory Lap" and "Escape from Spiderhead." In its title story, Eber interrupts his suicide attempt to save Robin from freezing to death before finding renewed reason to live.  
ANSWER: ***Tenth of December***  
[10] In Saunders's "Escape from Spiderhead," a drug called VerbaluceTM gives Jeff a speaking style described as this author "on stupid pills." Isabel comforts the dying Ralph Touchett in this author's *Portrait of a Lady.*  
ANSWER: Henry **James**  
<Literature American - Vishwa Shanmugam>

9. This theorem formalized a heuristic called Rayleigh's method. For 10 points each:  
[10] Name this theorem that states that given an equation involving *n* independent quantities and *k* independent units, the equation can be equivalently rewritten in terms of *n - k* namesake 'groups'.  
ANSWER: **Buckingham pi** theorem   
[10] Although there are many possible choices of basic dimensions when using the Buckingham pi theorem, most applications use the 7 'base units' named for and defined by this French organisation.   
ANSWER: **SI** [or **International System of Units** or **Systeme International**]  
[10] Dimensional analysis can be used to reinstate dimensional factors after working in units described by this adjective. Special relativity often uses a system of units named for this adjective in which the speed of light *c* is set to 1.   
ANSWER: **natural** units [prompt on Planck units or dimensionless units]  
<Science Physics - Joseph Krol>

10. The ceiling of this building's Hercules room is adorned with François Lemoyne's painting *The Apotheosis of Hercules*. For 10 points each:  
[10] Name this baroque French palace where *Crossing the Rhine* and *The King Governs Alone* adorn the ceiling of the Hall of Mirrors.  
ANSWER: Palace of **Versailles** [or Château de **Versailles**]  
[10] An artist with this surname was the "First Painter" to Louis XIV, and founded the French Academy after painting the walls of Versailles. A painter who hyphenated her maiden name Vigée **(vee-jay)** with this surname was the portraitist of Marie Antoinette.  
ANSWER: **Le Brun** [accept Charles **Le Brun** or Élisabeth Vigée **Le Brun**]  
[10] Charles Le Brun depicted Alexander riding a chariot pulled by an elephant while entering this city. A man in black preaches to a crowd in white in a massive temple in a John Martin painting depicting a feast in this city.  
ANSWER: **Babylon** [or **Bābil**im or **Bābiru**] (The last clue is from John Martin's depiction of Belshazzar's Feast)  
<Arts Painting - Ganon Evans>

11. This movement takes its name from a play where Karl Bushy, who goes by the name Wild, emigrates to fight in the American Revolution. For 10 points each:  
[10] Name this movement. The protagonist of a novel from this movement receives a pink ribbon in the mail and is buried under a linden tree.  
ANSWER: ***Sturm und Drang*** [accept **Storm and Stress**]  
[10] This *Sturm und Drang* playwright names an incomplete novel written by Georg Buchner, which is based around J.F. Oberlin's account of this playwright's mental breakdown and subsequent stay with Oberlin.   
ANSWER: Jakob Michael Reinhold **Lenz**  
[10] Friedrich Klinger's play *The Suffering Wife* is modeled on *Götz von Berlichingen*, a play by this German polymath and friend of Lenz who wrote a novella that ends with Young Werther's suicide.  
ANSWER: Johann Wolfgang von **Goethe** **(GUR-tuh)**  
<Literature European - Matt Weiner>

12. Future vice president Thomas Marshall claimed that when he was four years old he sat on the lap of whichever participant in an event named for this city wasn't talking. For 10 points each:  
[10] Name this city. A "doctrine" or "heresy" named for this city supported popular sovereignty and became a key issue in the election of 1860.   
ANSWER: **Freeport**, Illinois [or **Freeport** Doctrine; or **Freeport** Heresy]  
[10] This "Little Giant" was the creator of the Freeport Doctrine in his namesake debates with Abraham Lincoln. This person beat Abraham Lincoln in an 1858 Senate election in their home state of Illinois.  
ANSWER: Stephen **Douglas** [or Stephen Arnold **Douglas**]  
[10] At the opening of the 1858 campaign, Abraham Lincoln gave a speech using this metaphor about the difficulties of the dichotomy between free and slave states. Lincoln claimed that this metaphorical object would become "all one thing, or all the other."  
ANSWER: **House Divided** speech  
<History American (pre-1865) - Matthew Lehmann>

13. Peter Allsop argued that one part in the scores for these pieces was sometimes omitted in his history of these pieces through the 17th century. For 10 points each:  
[10] Name this popular genre of chamber piece from the Baroque era. These pieces, which can be split into types called "da camera" and "da chiesa" **(kee-AY-sah)**, include one from *The Musical Offering* that replaces one of its treble parts with a flute.  
ANSWER: **trio sonata**s [or **sonata a 3** or **sonata a tre**; prompt on sonatas alone]  
[10] This composer's first four opuses entirely consist of his trio sonatas. This composer of some variations on *La Folia* nicknamed one of his Twelve concerti grossi for premiering on Christmas.  
ANSWER: Arcangelo **Corelli**  
[10] The two treble lines of a trio sonata were most often played by this instrument also performed by Corelli. This instrument acts as soloist in Antonio Vivaldi's *Four Seasons*.  
ANSWER: **violin**s  
<Arts Music - Ethan Strombeck>

14. This book says that the "engrafted word" is "able to save your souls." For 10 points each:  
[10] Name this book of the Bible that Martin Luther called an "epistle of straw" because it asserts that "faith without works is dead."   
ANSWER: Epistle of **James** [or **Iakobos**]  
[10] Adherents of *sola fide* **(soh-lah fee-day)** may contrast James 2 with Romans 4, which explains how this man was justified by faith before God. James explains how this person was justified before men and called the "Friend of God" after the Binding of Isaac.  
ANSWER: **Abraham** [or **Abram**; or **Avraham**; or **Avram**]  
[10] In Acts, Paul and Silas tell this person to simply "Believe on the Lord Jesus Christ, and thou shalt be saved." He almost kills himself after an earthquake destroys his workplace in Philippi **(fil-li-pie)** and is usually referred to by his occupation.  
ANSWER: the Philippian **jailer** [or answers indicating a man who works as a **guard** or at a **prison**]  
<RMP Christian/Bible Religion - Clark Smith>

15. Molecules with this property have one more vibrational degree of freedom than expected. For 10 points each:  
[10] Name this property, held by all diatomic molecules. The simplest possible rigid rotor has a scalar moment of inertia because it has this property.  
ANSWER: **linear** [accept **linear** molecular geometry or **linear** rigid rotor]  
[10] Because they have one fewer rotational degree of freedom, there are this many vibrational modes available to a linear molecule. Give an answer in terms of *N*, the number of atoms in the molecule.  
ANSWER: **3N - 5** (there are three degrees of freedom for each atom in a linear molecule, of which three are translational and two are rotational)  
[10] Rotational energy levels are the most closely spaced and must be probed by this form of radiation. The excitation of water molecules by this form of radiation is exploited by a common household heating appliance.  
ANSWER: **microwave**s [accept **microwave** spectroscopy or **microwave** ovens]  
<Science Chemistry - Kevin Wang>

16. One character in this novel reads Edward Carpenter's *The Intermediate Sex* at Craiglockhart Hospital and begins to feel that it represents him. For 10 points each:  
[10] Name this novel in which the main character talks to the psychologist W.H.R. Rivers. This is the first novel in a trilogy including *The Eye in the Door* and *The Ghost Road*.  
ANSWER: ***Regeneration***  
[10] *Regeneration* is a novel by Pat Barker about this author's experience with World War I, during which this author wrote "Counter-Attack."  
ANSWER: Siegfried Loraine **Sassoon**  
[10] Siegfried Sassoon was friends with this poet, whom he met at Craiglockhart. This poet wrote about World War I in poems such as "Strange Meeting" and "Dulce et Decorum Est."  
ANSWER: Wilfred **Owen**  
<Literature British - Matthew Lehmann>

17. This principle was first established in *Hosanna-Tabor Evangelical Lutheran Church and School v. EEOC*. For 10 points each:  
[10] Name this exemption debated in *Biel* ***(beel)*** *v. St. James School* under which certain religious officials aren't protected by anti-discrimation laws.  
ANSWER: **ministerial** exemption [accept **ministerial** exception or **ecclesiastical** exception]  
[10] This Evangelical denomination advised using ministerial exemption to avoid lawsuits by assigning religious tasks to staff. Mike Stone said "Our Lord isn't Woke" in response to this organization's outgoing President J.D. Greear saying "Black Lives Matter."  
ANSWER: **Southern Baptist** Convention [or the **SBC**; prompt on Baptists alone]  
[10] Former President Steve Gaines caused early political rifts in the SBC when he backed a 2018 Seminary Report which included calls to remove hundreds of these monuments depicting figures like Nathan Bedford Forrest and Robert E. Lee.  
ANSWER: **Confederate** **statue**s [accept clear knowledge equivalents of **monument**s or **statue**s of **Confederate** generals or other figures in the **Confederacy**; prompt on statues alone with "Of who?"]  
<Current Events - Vishwa Shanmugam>

18. Jayarasi Bhatta argued against this process in a 9th-century text of the Charvaka school. For 10 points each:  
[10] Identify this form of reasoning, notably argued against by David Hume using the example of the sun rising tomorrow, which generalizes past examples to general principles or future actions.  
ANSWER: **induction** [or **inductive** reasoning]  
[10] This philosopher introduced the time-dependent color "grue" to illustrate the "new riddle of induction" in his 1955 *Fact, Fiction, and Forecast*.  
ANSWER: Nelson **Goodman**  
[10] Goodman worked with Henry Leonard on 1940's *The Calculus of Individuals*, one of the key texts of this field of metaphysics. Stanisław Leśniewski wrote extensively on this study of the relationships of parts to wholes.  
ANSWER: **mereology**  
<RMP Philosophy/Thought - Matt Weiner>

19. The "Mother of the Phillippine Red Cross" Trinidad Tecson joined this organization through the *sanguno* ritual, in which participants would drink their own blood. For 10 points each:  
[10] Name this secret society whose leader tore up tax certificates during the Cry of Balintawak, which kickstarted a Revolution in 1896.  
ANSWER: **Katipunan** [accept the **Kataastaasan, Kagalanggalangang Katipunan ng mga Anak ng Bayan**; accept the **KKK**]  
[10] Katipunan's revolt was further enflamed by the execution of this ophthalmologist at Bagumbayan. The Propaganda Movement and the progressive newspaper *La Solidaridad* published this man's novels *Noli Me Tangere* and *El Filibusterismo*.   
ANSWER: José **Rizal**  
[10] Rizal denounced the *bandala*, which was a remnant of the mercantilist system and involved sending local products to this colonial power. This colonial power ceded rights to the Philippines to the United States in the 1898 Treaty of Paris.  
ANSWER: **Spain** [accept Kingdom of **Spain** or **Espana**]   
<History World - Ganon Evans>

20. Answer the following about photometry, the measurement of the brightness of light sources. For 10 points each:  
[10] Unlike stellar luminosity, a star's brightness is dependent on this quantity of the star. This quantity is typically measured in parsecs.  
ANSWER: **distance**  
[10] Rather than measuring brightness across the whole spectrum, astronomers usually measure the brightness within a photometric band, with this band being the most common. The most common color index measures the difference in magnitude between this band and the V band.  
ANSWER: **B** band [or **blue** band; or **B**-V color index]  
[10] To determine stellar luminosity from photometric brightness measurements, one must determine both distance and the effect of this phenomenon, in which light is scattered and absorbed by interstellar gas.   
ANSWER: interstellar **extinction** [accept interstellar **redden**ing; prompt on attenuation]  
<Science Astronomy - Geoffrey Chen>

21. This artist placed a stuffed monkey in the middle of a work claiming to be a portrait of Cezanne, Renoir, or Rembrandt. For 10 points each:  
[10] Name this artist, the founder of the 391 magazine. His piece *I See Again in Memory My Dear Udnie* uses automobile parts like spark plugs to evoke genitals, and he depicted two intermeshed gears labeled "Femme" and "Homme" in another painting.  
ANSWER: Francis **Picabia** (the last work mentioned is *Machine Turn Quickly*)  
[10] Picabia represented this artist as a folding camera in a work titled *Ici, C'est Ici [this artist]*. This artist's 291 gallery inspired the name of Picabia's 391 magazine, and his own work includes a photograph of *Fountain* in front of Marsden Hartley's *The Warriors.*  
ANSWER: Alfred **Stieglitz**  
[10] *Fountain* was one of many "readymades" selected and modified by this Dada artist.  
ANSWER: Marcel **Duchamp**  
<Arts Painting - Vishwa Shanmugam>