**2021 National All-Star Academic Tournament**

**Round 11 – Tossups**

1. If it involves a one photon exchange, this phenomenon can be described by the Rosenbluth formula. Between a Bjorken-x of 0.3 and 0.6, the ratio of two structure factors observed during this phenomenon is lower than expected in the EMC effect. The effect of an atom on this phenomenon is given by the form factor. The existence of quarks was confirmed using a "deep" form of this phenomenon. The S-matrix encodes the namesake amplitudes of this phenomenon, which can be squared to find a quantity usually measured in barns, called the cross-section. This phenomenon was observed when firing alpha particles at thin gold foil, suggesting that nuclei are compact. For 10 points, Rutherford names an elastic type of what process, in which particles are deflected from their path?  
ANSWER: **scattering** [or elastic **scattering** or deep inelastic **scattering** or Rutherford **scattering**]  
<Science Physics - Vishwa Shanmugam>

2. In this novel, the protagonist describes her mother's hair as "little candy circles" before comparing it to "the warm smell of bread." After lamenting her lack of friends, this novel's protagonist compares herself to "a balloon tied to an anchor" because the men and women in her family "live in separate worlds." In this novel, a drunken bum offers a girl one dollar for a kiss, causing the protagonist and two of her friends to abandon their high heels. A character in this novel breaks his arms during the Tarzan Tree Jumping Contest. This novel's protagonist befriends Sally, who later abandons her at a carnival. For 10 points, name this novel composed of 44 vignettes about Esperanza Cordero's time at the title residence in Chicago, by Sandra Cisneros.  
ANSWER: *The* ***House on Mango Street***  
<Literature American - William Grossman>

3. Carole Meredith pioneered the use of DNA fingerprinting to distinguish kinds of this crop while working at a department devoted to this plant at UC-Davis. By using morphometrics on the leaves of this crop, Pierre Galet **(ga-lee)** helped create modern ampelography. Robert Parker Jr. inspired massive changes in the harvest of this crop. In Europe, much of this crop has been grafted onto American rootstocks since the phylloxera **(fi-LOK-suh-ruh)** blight of the late 19th century. Like cheese, the French system of appellations was introduced to regulate a product made from this fruit based on factors like *terroir* **(ter-WAHR)**. Its varieties include Concord and Cabernet Sauvignon which are often crushed into must. For 10 points, Napa Valley has many vineyards for growing what fruit for wine?  
ANSWER: **grape**s [or **grape**vines; or ***Vitis***; or ***V****itis* ***vinifera***; or ***V****itis* ***labrusca***]  
<Other Academic - Shan Kothari>

4. “Fifth Avenue boys" joined this organization at San Antonio's Menger Hotel. A prominent member of this organization popularized a blue and white dotted bandana as part of its uniform. Buffalo Bill's recruitment of this organization's former members into his Wild West show lent it the nickname of a "Congress" for this group. Richard Oulahan coined this organization's name after hearing an offhand remark. This organization's ironic lack of horses earned them the nickname of the "Weary Walkers" of its commander Leonard Wood. An Assistant Secretary of the Navy retired from his position to form this group, which joined Buffalo Soldiers in attacking Kettle Hill during the Battle of San Juan Hill. For 10 points, name this volunteer cavalry division organized by Teddy Roosevelt during the Spanish-American War.  
ANSWER: **Rough Riders** [or **1st** United States **Volunteer Cavalry**; prompt on United States military before "Congress" is read; prompt on United States Army before "Congress" is read]  
<History American (1865-1945) - Ganon Evans>

5. Fujiwara no Hidesato **(foo-jee-wah-rah no hee-deh-sah-toh)** coats his arrows in this substance so that he can kill a giant centipede. Osmotar sends a marten to obtain this substance from fighting bears, in an attempt to brew beer for Ilmarinen's wedding. After killing a figure born from this substance, Fjalar **(fy-ah-lahr)** and Galar **(guh-lahr)** mixed his blood with honey to create the Mead of Poetry. The aconite plant arose from this substance, which forms the river Ván. The Hero Twins were conceived when some of this substance fell on the hand of their mother, Xquic **(ch-keek)**. Isis mixed dirt and this substance to create a snake that would poison Ra in order to find his true name. Kvasir **(kuh-vah-seer)** was created from, for 10 points, what substance produced from the mouths of the Aesir **(ay-seer)** and Vanir **(vah-neer)**.  
ANSWER: **saliva** [or **spit**; or **foam**; or **froth**; or **spit**tle]   
<RMP Non-Greek/Roman Myth - Rahul Rao - Pothuraju>

6. An invention that uses several of these instruments was developed into its modern form by the brothers François and Pieter Hemony, two makers of these instruments. Two of these instruments typically make up the Yoruban agogô, which forms part of a samba rhythm section. The coronation scene of *Boris Godunov* includes sixteen bars of these instruments that mimic their *trezvon* style from Orthodox ceremonies. These instruments are arranged by pitch and attached to keyboards in a carillon. Unusually, cannons and these instruments are orchestrated in Tchaikovsky's *1812 Overture*, where these instruments are sometimes replaced with a "tubular" type. Clappers are used to strike, for 10 points, what cup-shaped metal instruments that are often rung from church towers?  
ANSWER: **bell**s [accept church **bell**s or **chime**s; accept cow**bell**s; prompt on carillons until it is mentioned]  
<Arts Music - Ethan Strombeck>

7. In Jacobus de Varagine's **(YAH-koh-boos day vah-RAH-jee-nay's)** *Golden Legend*, Sanctilus's arm gets stuck while he tries to remove one of these objects. Only Kay can open a box containing one of these objects in the *Perlesvaus*. A character who holds one of these objects describes contrapasso as the "law of counter-penalty" in the 28th Canto of an epic poem. A character keeps one of these things but is slightly injured because he gave his host 3 kisses but hid a sash. In Dante's *Inferno*, the Occitan **(OX-it-an)** troubadour Bertran de Born carries one of these objects. In a poem with bob and wheel rhyme, a character almost loses one of these things to a gigantic armored figure that is actually Bertilak; that poem is by the Pearl Poet. For 10 points, name this item lost by the Green Knight when he is decapitated by Gawain.  
ANSWER: decapitated **head**s [accept **beheading** contests]  
<Literature European - Ganon Evans>

8. Wealthy homeowners in this country used nets to disguise their property from government helicopters enforcing a property tax on pools. In 2011, the student-organized Indignant Citizens Movement occupied the White Tower in this country. A "haircut" on bondholders in this country was a 53.5 percent debt write-down negotiated by Christine Lagarde. Mario Draghi pioneered an unlimited purchasing plan for bonds from this country to prevent further decline of the euro. Failed pension reform resulted in the victory of the Syriza party in a 2015 snap election opposing Eurozone austerity measures in this country. For 10 points, name this country which was bailed out multiple times by the IMF and European Central Bank while led by Alexis Tsipras.  
ANSWER: **Greece** [or **Hellas** or the **Hellenic Republic**]  
<History European 1914-present - Ganon Evans>

9. Electroless coatings of this metal alloyed with phosphorus are applied to circuit boards and immersed in noble metals as an alternative to solder **(SOH-der)**. This metal was the first found to affect polymerization, but is not in any of the resulting catalysts produced by the Ziegler group. Thioketal **(THIGH-oh-key-tall)** intermediates are formed from carbonyls **(car-buh-NEELS)** and reduced to alkanes in the presence of this metal during the Mozingo reaction. Skeletal catalysts made of this non-precious metal are pyrophoric because of adsorbed hydrogen. A hydrogenation **(hy-DRODG-en-ation)** catalyst made of this metal is named for Murray Raney. An alternative to galvanization is electroplating with this corrosion-resistant metal. Iron and cobalt precede, for 10 points, what ferromagnetic transition metal with atomic number 28?  
ANSWER: **nickel** [or **Ni**; accept electroless **nickel** immersion gold, Raney **nickel**, or **RNi**]  
<Science Chemistry - Hari Parameswaran>

10. Marguerite Porete's **(mah-gur-EET POR-et)** *The Mirror of Simple Souls* describes this many stages toward the soul's annihilation. St. Teresa **(tair-AY-sa)** of Ávila's **(AH-vee-lah)** *The Interior Castle* envisions the soul as a castle with this many mansions. A passage from Isaiah 11 led patristic authors to describe this many gifts of the Holy Spirit. Thomas Merton titled a memoir after a mountain with this many storeys in reference to Dante's *Purgatorio*, which has this many terraces. Pope Gregory the Great combined *tristitia* **(tri-stEE-chia)** with *acedia* **(ah-SAY-dee-a)** in codifying a list of this many destructive attributes. Anointing of the sick and reconciliation are among this number of Catholic sacraments. In Genesis, God rested on this day of creation, which was the final one. For 10 points, give this standard number of deadly sins.  
ANSWER: **seven**  
<RMP Christian/Bible Religion - Shan Kothari>

11. In 1965, Charles Perkins led students at a university in this city in organizing non-American "freedom rides." Francis de Groot, a member of the New Guard, caused controversy after he interrupted the ribbon-cutting ceremony for a bridge in this city. Duke Kahanamoku's **(kah-hah-nah-moe-koo)** 1915 visit to this city inspired the Freshwater Surf Club to popularize surfing in its country. Irish rebels in this city shouted "Death or Liberty and a ship to take us home" during the Castle Hill rising. John Macarthur and George Johnston stormed this city's Government House during the Rum Rebellion. Convicts aboard Arthur Philip's First Fleet arrived at this city's Botany Bay in 1788. For 10 points, name this city where William Bligh governed the state of New South Wales.  
ANSWER: **Sydney**, Australia  
<History World - Hari Parameswaran>

12. A technique for this biological process called "pyramiding" generates "stacked" events. Speeding up this process is the primary application of inducing double haploidy **(hap-loy-dee)**. A phenotype of interest is assumed to be linked to a morphological or genetic marker in a "marker-assisted" approach to this process. A heterogenous population is produced in a "mass" approach to this process contrasted with a "pure" approach to it. Norman Borlaug used the "shuttle" form of this process to create a semi-dwarf product. Assemblages of organisms produced through this process are called cultivars, which include Cavendish bananas. For 10 points, name this process, which can be performed "selectively" over thousands of generations to cause domestication.  
ANSWER: plant **breed**ing [or selective **breed**ing; accept **interbreed**ing; accept shuttle **breed**ing; accept artificial **selection** or marker-assisted **selection** or **MAS** or mass **selection** or pure-line **selection** before "selectively"; prompt on domestication with "repeatedly performing what process led to domestication?"; prompt on hybridization or reproduction or crossing with "repeated hybridization of organisms is performed in what process?"; prompt on evolution; prompt on genetic modification; do not accept or prompt on "speciation"]  
<Science Biology - Geoffrey Chen>

13. A character in this novel states that "what I find a major irritation are those … going from post to post looking for romance." That protagonist of this novel says that he reads "sentimental romance" because it is "an extremely efficient way to maintain … command of the English language." In this novel, the protagonist awkwardly tries to explain sex to Reginald Cardinal. The protagonist continues to work on the day he receives news of his father's death in this novel, which happens during a meeting between the Prime Minister and von Ribbentrop hosted by his employer, Lord Darlington. This novel opens with the protagonist taking a "motoring trip" to visit Miss Kenton. For 10 points, name this novel about the butler Stevens, by Kazuo Ishiguro.  
ANSWER: *The* ***Remains of the Day***  
<Literature British - William Grossman>

14. The first photograph in a 1958 Robert Frank book shows one of these objects obscuring the face of a person looking out of a Hoboken window. One of these objects was appropriated from a yacht shortly before it was photographed by Thomas E. Franklin, after which it went missing until 2016. One of these objects appears in front of Joseph Rakes attacking Ted Landsmark in a 1976 Stanley Forman photograph. Farm Security Administration janitor Ella Watson holds a mop and a broom while standing in front of one of these objects in a 1942 photograph by Gordon Parks. In 1969, Neil Armstrong took a photograph of Buzz Aldrin saluting one of these objects on the Moon. For 10 points, name this object which Joe Rosenthal depicted being raised on Iwo Jima.  
ANSWER: **American flag** [or **Star-Spangled Banner**; or **U.S. flag**; or **Old Glory** before "Old Glory" is read; prompt on flag with "What flag?"; prompt on flagpole with "What was attached to the flagpole?"]  
<Arts Photography - Matt Weiner>

15. A popular English translation of this book was produced by Delba Winthrop and her husband Harvey Mansfield. This book introduced its author's namesake "paradox" wherein improved social conditions lead to increased social frustration. This book calls juries "a school, free of charge and always open, where each juror comes to be instructed in his rights." It warns of how a "a network of small complicated rules" can lead to a "soft despotism," and argues that a culture of individualism is key to warding off a "tyranny of the majority." This book was written while its author was touring the title nation's prison system with Gustave de Beaumont. For 10 points, name this 1840 study of the United States government, written by Alexis de Tocqueville.  
ANSWER: ***Democracy in America***  
<RMP Philosophy/Thought - Ganon Evans>

16. This person received a retrial which overturned her confinement to a medical institution after she snuck a letter to activist Myra Bradwell. When this woman discovered that her son Robert meant to initiate that confinement after a number of shopping binges, she attempted suicide by overdosing on laudanum. This woman caused a scandal by wearing lilac instead of black at a funeral and asked "I wonder if the women of Washington expect me to muffle myself in mourning for every soldier killed?" During seances, the husband of this First Lady was said to take advice from spirits representing Daniel Webster, while she attempted to contact her dead son William. For 10 points, name this First Lady whose husband Abraham was assassinated while sitting next to her in Ford's Theater.  
ANSWER: Mary Todd **Lincoln** [or Mary Ann **Todd**]  
<History American (1865-1945) - Justin Hawkins>

17. Richard Posner argued that this movement "turns its back on the Western tradition of rational inquiry" in an op-ed entitled "The Skin Trade." One book from this movement ends with the allegorical science fiction story "The Space Traders;" that 1992 book is entitled *Faces at the Bottom of the Well*. This movement grew out of a related "legal studies" movement whose founding members included Duncan Kennedy and Roberto Unger. A thinker from this **(emphasize)** legal movement used *DeGraffenreid v. General Motors* to illustrate how many different aspects of a person's identity combine to create discrimination in *On Intersectionality*. For 10 points, Derrick Bell and Kimberlé Crenshaw are prominent proponents of what legal movement which contends that the law exists to perpetuate white supremacy?  
ANSWER: **critical race** theory [or **CRT**; prompt on critical legal studies]  
<Social Science Misc - Caleb Kendrick>

18. In a novel by this author, Ralph directs a group of prisoners to stage the Restoration play *The Recruiting Officer*. Dowie Stead pursues one of this author's protagonists after he takes the teacher McCredie hostage with his brother Mort. Jereth engraves "He who saves a single life saves the entire world" onto a gold ring for one of this author's protagonists. After marrying the white servant Gilda, the title character of a novel by this author kills many relatives of Mr. Newby after being abused for his part-indigenous ancestry. In a novel by this author of *The Chant of Jimmie Blacksmith*, Amon Göth is bribed to allow many Jews to work in the title industrialist's factories. For 10 points, Steven Spielberg adapted what Australian author's novel *Schindler's Ark*?  
ANSWER: Thomas **Keneally**  
<Literature World / Classical / Misc - Joseph Krol>

19. The expression for energy density of these particles contains a **(*read slowly*)** four elevenths to the four thirds power times seven eighths coefficient. These particles decoupled from ordinary matter one second after the Big Bang, producing a roughly 2 Kelvin gas of them. A hypothetical one of these particles with right-handed helicity is a dark matter candidate. 25 of these particles from SN 1987A were detected in a milestone in the field of multi-messenger astronomy. 99% of the energy from a supernova is released in the form of these particles. The Homestake experiment observed only one third the predicted number of these particles from the sun, which led to the discovery that they oscillate between flavor states. For 10 points, name these nearly massless neutral leptons.  
ANSWER: **neutrino**s [or **antineutrino**s; accept cosmic **neutrino** background; accept specific **neutrino**s like electron **neutrino**s; accept sterile **neutrino**s]  
<Science Astronomy - Geoffrey Chen>

20. In a painting by this artist, Emma Story looks at the viewer over her shoulder while playing the piano. This artist ridiculed the idea of needing "a ticket to paint the Last Supper" to defend his painting of German soldiers using naked civilians as the title *Barricade*. The socialist magazine *The Masses* exhibited this artist's drawings of "Splinter Beach," a wooden pier on the East River on which many nude children play in his *42 Kids*. Men disappointedly inspect a garbage can for food in a drawing by this artist that inspired the name of a realist school led by his mentor Robert Henri. Luis Angel Firpo knocks Jack Dempsey over a rope in a painting by this Ashcan artist. For 10 points, name this painter of many boxing scenes, like *Stag at Sharkey's*.  
ANSWER: George **Bellows**  
<Arts Painting - Ganon Evans>

21. A character in this play describes one man as a "stream of water" and another as a "dark river filled with branches." Another character opens her cloak "like a great bird" as blue light floods the stage and two violins play during a death scene in this play. A song in this play describes a dying stallion who would not drink water. After being asked for a knife to cut grapes, a mother in this play curses knives because of the murders of her husband and son. A beggar woman and a white-faced woodcutter represent Death and the Moon in this play. After the elopement of this play's female protagonist, her intended husband and Leonardo Felix stab each other. For 10 points, name this play about the disrupted marriage of the Bride and Bridegroom, by Federico García Lorca.  
ANSWER: ***Blood Wedding*** [or ***Bodas de sangre***]  
<Literature European - Eve Fleisig>

**2021 National All-Star Academic Tournament**

**Round 11 – Bonuses**

1. Carla Gannis created an animation of this artwork that gives its figures rapidly changing emoji heads. For 10 points each:  
[10] Name this work that includes the words “For he spoke, and it came to be; he commanded, and it stood firm" near God, who looks at a translucent, half-filled sphere. A possible self-portrait in this painting depicts a giant with a cracked, egglike torso being impaled by a tree.  
ANSWER: *The* ***Garden of Earthly Delights***  
[10] This Dutch artist painted *The Garden of Earthly Delights* as well as multiple triptychs of *The Last Judgment*.  
ANSWER: Hieronymous **Bosch** [or Jheronimus van **Aken**]  
[10] Bosch’s *Last Judgment* scene held in this city features a pink-clad Christ and is more hellish than his Vienna and Munich scenes. A painter who succeeded Petrus Christus as this city’s most prominent painter showed St. Michael wearing gold armor and holding scales in his *The Last Judgment*. ANSWER: **Bruges**, Belgium (the second painter is Hans Memling)  
<Arts Painting - Vishwa Shanmugam>

2. The Federal Party led a protest outside the Galle Face Green against a prime minister with this surname. For 10 points each:  
[10] Give this surname of Solomon, who was assassinated by a Buddhist monk after he signed a pact with the leader of the Federal Party. The first woman to become a prime minister in Asia had this last name.  
ANSWER: **Bandaranaike** [accept Solomon **Bandaranaike** or Sirimavo **Bandaranaike**]  
[10] Solomon Bandaranaike's pact with S.J.V. Chelvanayakam gave limited autonomy to people of this ethnic minority in Sri Lanka, who formed a paramilitary group known as their namesake "tigers."  
ANSWER: Sri Lankan **Tamil**s [or **Tamilian**s; Eelam **Tamil**s; or Ceylon **Tamil**s; accept the **Tamil** Tigers or the Liberation Tigers of **Tamil** Eelam]  
[10] This country brokered a 2002 ceasefire between the Tamil Tigers and the Sri Lankan government. Yitzhak Rabin agreed to recognize the PLO as the legitimate representative of the Palestinian people in a set of accords named after this country's capital.  
ANSWER: Kingdom of **Norway**  
<History World - Hari Parameswaran>

3. In one novel by this writer, the best friends and ex-lovers Frances and Bobbi become romantically entangled with the married couple Melissa and Nick. For 10 points each:  
[10] Name this author of *Conversations with Friends*. In another novel, they wrote about the on-and-off relationship between the students Marianne and Connell.  
ANSWER: Sally **Rooney**  
[10] The protagonists of *Conversations with Friends* attend open mic nights around this city. The frame story of *At Swim-Two-Birds* is about a student in this capital city.  
ANSWER: **Dublin**  
[10] In Rooney's *Normal People*, Connell is agitated by reading a passage from this Jane Austen novel where it seems like Harriet Smith might marry George Knightley. This book's title character is an aspiring matchmaker.  
ANSWER: ***Emma***  
<Literature British - Shan Kothari>

4. An interlude named for this kind of event begins with a wild fortissimo **(fort-EE-see-moh)** melody on the notes "E-flat F-flat E-flat up to C-flat." For 10 points each:  
[10] Name this kind of event that occurs at the end of a certain opera's first act. Ned Keene calms a pub crowd by singing a round after a town outcast arrives during this kind of event.  
ANSWER: a **storm** [or thunder**storm**]   
[10] Ellen Orford brings an apprentice to the title character of this opera while a storm strikes the Borough. This opera ends with that title fisherman drowning himself on the advice of Captain Balstrode.  
ANSWER: ***Peter Grimes***  
[10] *Peter Grimes* is an opera by this British composer of a *War Requiem* and *The Young Person's Guide to the Orchestra*. This composer's partner Peter Pears **(peerz)** played lead roles in many of his operas.  
ANSWER: Benjamin **Britten**  
<Arts Opera - Ethan Strombeck>

5. Since this substance is not a chemically defined medium, cells are usually "starved" of it for 24 hours before experiments are done. For 10 points each:  
[10] Name this substance whose fetal bovine form is a common cell culture medium. The albumin found in this substance is a common blocker in lab techniques like ELISA **(ee-LIE-suh)**.  
ANSWER: fetal bovine **serum** [accept **FBS**, blood **serum**, or bovine **serum** albumin; prompt on blood, blood plasma, or bovine albumin]  
[10] Like centrifuges, these common devices can mechanically lyse (LICE) platelets to create a serum-free medium. One of these devices separated conjugating pairs of cells in a study of Hfr strains by Wollman and Jacob, and one made by Waring separated phages from cells in the Hershey-Chase experiment.  
ANSWER: **blender**s [accept Waring **blenders**; prompt on agitators, mixers, or liquidisers; do not accept or prompt on “food processors”]  
[10] Platelet lysate is a common serum-free medium for the mesenchymal **(meh-ZAN-ky-mull)** type of these cells, which are pluripotent if they can mature into any type of cell.  
ANSWER: mesenchymal **stem** cells [prompt on MSCs]  
<Science Biology - Vishwa Shanmugam>

6. Though this king lived three centuries after St Cuthbert, a manuscript illustration of him presenting a book to Cuthbert is the earliest surviving portrait of an English king. For 10 points each:  
[10] Name this king, who defeated a coalition of Scots and Vikings at the Battle of Brunanburh. In 927 he became the first King of all of England.  
ANSWER: **Athelstan** [or **Aethelstan**]  
[10] The first region to accept Athelstan as king was this kingdom, where his father Edward had died in 924. A ruler of this kingdom erected a 150-mile earthwork to defend it from neighbouring Wales.  
ANSWER: **Mercia**  
[10] Athelstan finally became king of all England after conquering a kingdom named for this northern city. Richard III was the last king of a house named for this city, which fought the Lancasters in the Wars of the Roses.   
ANSWER: **York** [or the House of **York**]  
<History European to 1400 - Joseph Krol>

7. This process is performed on a filament by a device named for Bowden. For 10 points each:  
[10] Name this manufacturing technique often contrasted with casting and drawing, which can involve using a hydraulic press to push an aluminum billet through a steel die.  
ANSWER: **extrusion** [or **extruding**; or **extrusion** molding; accept the **extrude** tool; prompt on molding with "what form of molding?"; prompt on pushing]  
[10] The filaments produced by Bowden extruders can be used in fused filament fabrication, a process used by these additive manufacturing devices that manufacture solid objects with depth.  
ANSWER: **3D printer**s [or **3 dimensional printer**s; prompt on printers]  
[10] This type of software usually has an extrude tool that takes a 2D shape and extends it along the perpendicular dimension. SolidWorks and Autodesk are examples of this type of software, which output files instructing 3D printers how to print objects modeled in them.  
ANSWER: **CAD** software [or **computer-aided design** software; accept **CAM** software or **computer-aided manufacturing** software; accept **CAGD** software or **computer-aided geometric design** software; prompt on 3D modeling or 3D design software]  
<Science Engineering - Geoffrey Chen>

8. This is the first work Angel Flores uses to justify the year 1935 as a literary "point of departure" in his essay "Magical Realism in Spanish-American Fiction." For 10 points each:  
[10] Name this collection which includes the short stories "The Uncivil Teacher of Court Etiquette Kôtsuké no Suké" and "The Widow Ching – Pirate."  
ANSWER: *A* ***Universal History of Infamy*** [or *A* ***Universal History of Iniquity*** or ***Historia universal de la infamia***]  
[10] Flores attributed the growth in magical realism to this author's Franz Kafka translations. This author of *A Universal History of Infamy* wrote "The Library of Babel."  
ANSWER: Jorge Luis **Borges** [or Jorge Francisco Isidoro Luis **Borges** Acevedo]  
[10] Flores argued the "well-knit plots" of magical realist novels originate from reading novels in a genre titled for this profession. The visceral realists Belano and Lima track a poet to the Sonora desert in a novel titled for this job.  
ANSWER: **detective**s [accept *The Savage* ***Detective****s* or *Los* ***Detective****s Salvajes*] (by Roberto Bolaño)  
<Literature World / Classical / Misc - Ganon Evans>

9. Rand Paul dubbed this woman "the head cheerleader for waterboarding," and along with Jeff Flake, was one of two Republicans to vote against her nomination. For 10 points each:  
[10] Name this intelligence officer who was succeeded by William Burns as CIA director in February 2021. She was criticized for running a black site in Thailand under conditions described in John Yoo's torture memos.  
ANSWER: Gina **Haspel**   
[10] Both Haspel and Burns are investigating odd instances of neurological problems among foreign service operatives which was first documented in agents returning from this city. Stubbs et al. argued that a rare jungle cricket was causing a "syndrome" named for this city.  
ANSWER: **Havana** [or **Havana** syndrome]  
[10] Joe Biden has declared interest to Burns in closing this American detention facility in Cuba.  
ANSWER: **Guantanamo** Bay [or Centro de detención de **Guantánamo**; accept **GTMO**; accept **Gitmo**]  
<Current Events - Matt Weiner>

10. This element is the most common in both bastnäsite and monazite and is easy to isolate from its very similar neighbors because it can take the +4 oxidation state. For 10 points each:  
[10] Name this element which is miscible with thorium, which it replaced in gas mantles. This element's ammonium nitrate is a useful single-electron oxidizing agent.  
ANSWER: **cerium** [or **Ce**; accept **cerium** ammonium nitrate; prompt on ceria or CAN]  
[10] The placement of thorium underneath cerium in the periodic table was first suggested by this scientist's actinide concept, which was prompted by their codiscovery of several transuranium elements.  
ANSWER: Glenn (Theodore) **Seaborg**  
[10] With a prevalence on par with copper, cerium is the most common member of these elements. This group of elements is a superset of the lanthanides that includes yttrium and scandium, which are largely indistinguishable.  
ANSWER: **rare-earth** elements [accept **rare-earth**s or **rare-earth** metals; prompt on Group 3]  
<Science Chemistry - Kevin Wang>

11. The *potnia theron* **(poht-nee-ah thehr-awn)** or "mistress of animals" is a recurring motif in Greek art and mythology typically depicting a female figure flanked by two animals. For 10 points each:  
[10] Homer used *potnia theron* to refer to this Greek goddess of the hunt in Book 21 of the Iliad.   
ANSWER: **Artemis**  
[10] Older statues of Artemis depict her holding a stag and one of these animals. The hands of the Seated Goddess of Çatalhöyük **(kuh-tal-hoo-yuk)** rest atop two of these animals.   
ANSWER: **lioness** [prompt on lion]  
[10] Two panthers flank one of these creatures resembling a *potnia theron*-like figure in the western pediment of the Temple of Artemis at Corfu. Mopsus, the Argonaut, was killed by animals formed from the blood of one of these creatures.   
ANSWER: **Gorgon**s [accept **Medusa**]  
<RMP Greek/Roman Myth - Rahul Rao - Pothuraju>

12. For 10 points each, answer the following about the judicial career of Hermann Melville's father-in-law, Lemuel Shaw:  
[10] Shaw introduced a standard of negligence in tort cases in a case named for a defendant of this surname. A person of the same surname provided the funds to start Gallaudet **(gal-uh-DET)** University and served as Postmaster General.   
ANSWER: **Kendall** [or Amos **Kendall**; or George K. **Kendall**]  
[10] Shaw wrote a defining majority opinion in *Commonwealth v. Hunt* which ruled that these entities were not engaging in criminal conspiracy. The opinion allowed the formation of later examples of these entities such as the Knights of Labor.  
ANSWER: labor **unions** [or trade **unions**]  
[10] Shaw was best known for a murder case involving a Dr. Parkman and a man with this surname. Another man of this surname gave a speech asserting that "there are those who love it" while arguing in a case involving John Wheelock.  
ANSWER: **Webster** [or Daniel **Webster**; or *Commonwealth v.* ***Webster***; or the **Webster**-Parkman Case]  
<History American (pre-1865) - Matthew Lehmann>

13. A symphony by this composer includes Paul Laurence Dunbar poems as epigraphs for each movement and features a tenor banjo in its scherzo. For 10 points each:  
[10] Name this composer whose Symphony No. 1 incorporates blues progressions and elements of popular African-American music and is subtitled *Afro-American*.  
ANSWER: William Grant **Still**  
[10] The third movement of Still's "Afro-American" Symphony opens with a melody very similar to this composer's show tune "I Got Rhythm." This composer fused jazz and classical music in his piece *Rhapsody in Blue*.  
ANSWER: George **Gershwin**  
[10] The "Afro-American" Symphony begins with a bluesy solo for this instrument. This wind instrument's family includes the hecklephone and a "d'amore" variety.  
ANSWER: **oboe** [accept **oboe** d'amore]  
<Arts Music - Noah Sheidlower>

14. Instead of wishing for the return of this character, a woman wishes for Frieda to stop being presented with a handkerchief she used to smother her child. For 10 points each:  
[10] Name this character, who befriends the poet Homeless while in Stravinsky's clinic. His only personal belonging is a "greasy black cap" with an embroidered "M."   
ANSWER: the **Master**  
[10] Like the Master, this author was derided by critics after Joseph Stalin watched their play *The White Guard* 15 times. The Master is an autobiographical depiction of this author of *The Master and Margarita*.  
ANSWER: Mikhail **Bulgakov** [or Mikhail Afanasyevich **Bulgakov**]  
[10] Bulgakov satirized Soviet literary critics with this literary organization in the novel. Behemoth burns down this organization's headquarters above Griboedov's restaurant, and the chairman of this organization, Mikhail Berlioz, is decapitated by a street car.  
ANSWER: **MASSOLIT** [or **Massovaia Literatura**]  
<Literature European - Ganon Evans>

15. Wassily Leontief **(VASS-uh-lee lee-AWN-tee-EFF)** names one of these functions which is the limiting case of their CES type where factors are perfect complements. For 10 points each:  
[10] Identify these functions which are written as a constant times labor to the alpha times capital to the beta in Cobb-Douglas form.   
ANSWER: aggregate **production** functions  
[10] To guarantee the existence of a unique steady-state, production functions are assumed to satisfy the Inada conditions in neoclassical models of this phenomenon which is quantified by an increase in real GDP.   
ANSWER: economic **growth**   
[10] This simple endogenous growth model does not assume diminishing returns to capital, so its namesake Cobb-Douglas function is linear in capital.   
ANSWER: **AK** model  
<Social Science Economics - Caleb Kendrick>

16. Jihad of this concept is often regarded as the Greater Jihad, as it pertains to an inner struggle, as opposed to external holy war. For 10 points each:  
[10] Name this concept identified by the Arabic word *nafs*, which Sufis **(soo-fees)** believe undergo three stages of development as one becomes a better Muslim. Like Christianity, this concept is also thought to be immortal.  
ANSWER: **soul** [accept **self** or **ego**]  
[10] Muslims seek to improve their relationship with Allah, which leads to the improvement of this set of morals. In contrast with adab **(ah-dahb)**, this Arabic term refers to one's internal values or disposition.  
ANSWER: ***Ahklaq*** [or ***khuluq***]  
[10] The term fajr describes a tranquil stage of the soul that Allah will call to Heaven, as described in Surah al-Fajr. The Fajr prayer, one of the 5 daily prayers, is performed at this time of day.  
ANSWER: **dawn** [accept **daybreak**]  
<RMP Non-Christian/Bible Religion - NourEddine Hijazi>

17. Magnetometers made from negatively-charged examples of these defects are sensitive enough to detect neurons firing, rivaling SQUIDs in capability. For 10 points each:  
[10] Name these specific crystal defects, which may be able to serve as qubits at room temperature because they can act as single photon sources with long coherence times.   
ANSWER: **nitrogen vacancy** centers [or **nitrogen vacancies** or **NV** centers or **color center**s; prompt on vacancies or point defects]  
[10] NV centers are defects where a nitrogen and an empty space are found in the lattice of this substance, whose normally periodic lattice makes it a 10 on the Mohs scale.   
ANSWER: **diamond**s  
[10] Nanodiamonds with NV centers can display this phenomenon with a notably higher quantum yield than quantum dots. Due to this property, nanodiamonds may replace coumarine and rhodamine in some biological applications.  
ANSWER: **fluorescence** [or word forms like being **fluorescent**; prompt on photoluminescence or descriptions of giving off light]  
<Science Physics - Vishwa Shanmugam>

18. Arthur Danto argued that these objects receive their significance from a namesake institution in his book *The Transfiguration of the Commonplace*. For 10 points each:  
[10] Name these objects, whose beauty and appreciation is studied in aesthetics.  
ANSWER: works of **art** [or **artwork**s; accept any reasonable answer that mentions **art**]  
[10] This philosopher argued in one essay that art is able to create strife between the "Earth" and the "World." That essay argues that art begins with an *Ursprung*, or a "primal leap."   
ANSWER: Martin **Heidegger**  
[10] Heidegger's analysis of van Gogh's *A Pair of Shoes* in "The Origin of the Work of Art" was discussed using this method in Jacques Derrida's book *Restitutions*. Derrida developed this post-structuralist approach which aims to subvert binary oppositions.  
ANSWER: **deconstruction**ism   
<RMP Philosophy/Thought - Bradley McLain>

19. Mita Banerjee characterized the strolling Indian from Henry David Thoreau's *Walden* as "literary brownface" in a book titled for an "Ethnic" form of this activity. For 10 points each:  
[10] Name this activity which Carwin performs to drive Theodore mad in Charles Brockden Brown's novel *Wieland*. A description is acceptable.  
ANSWER: **ventriloquism** [accept word forms; accept **biloquism**; accept descriptions of **imitating voices** or **throwing voices**; prompt on pretending to be someone else or making someone hear voices or similar descriptions with "What method is used to do that?"]  
[10] Banerjee criticized this author's description of a Native American "affected by sort of a cold shadow of the white man's curiosity" while seeing Hester Prynne wearing the Scarlet Letter.  
ANSWER: Nathaniel **Hawthorne**  
[10] Jennifer Glaser discussed racial ventriloquism in America in reference to this ethnic group. A novel by a member of this ethnic group discusses how the African-American professor Coleman Silk attempts to pass as a member of this group.  
ANSWER: **Jew**ish-American [accept specific forms of Judaism, such as **Hasidism**]  
<Literature American - Ganon Evans>

20. Sarah Pomeroy wrote a book length study of these people after noting that a reference in her research claimed that they did not exist. For 10 points each:  
[10] Identify these people who, unusually for their time, were allowed to own land. They wore knee-length chitons rather than ankle-length ones during races.   
ANSWER: **Spartan women** [accept obvious equivalents; prompt on partial answer]  
[10] Female participation in athletics was mandated by this Spartan ruler so that they would be strong for childbirth. This lawgiver created the Great Rhetra constitution and implemented the agoge **(AH-go-gay)** system.  
ANSWER: **Lycurgus**  
[10] Because many of the domestic tasks typical for women in the rest of Greece were not done by Spartan women, they were instead performed by this class of Spartan serfs.  
ANSWER: **helot**s  
<History European to 1400 - Steven Liu>

21. Richard Routley described objects which lacked this property as living in "Meinong's jungle." For 10 points each:  
[10] Name this property, which in predicate logic names a quantifier that looks like a backwards capital E. Kant argued that the ontological argument was invalid because this property is not a predicate.  
ANSWER: **exist**ence [or there **exist**s; or **existential** quantifier]  
[10] Routley's modal Meinongianism has been championed by Graham Priest, who is best-known arguing that these things can be true, a view called *dialetheism*. Anything follows validly from one according to the "principle of explosion."   
ANSWER: **contradiction**s [prompt on paradoxes]  
[10] This philosopher criticized Meinong for including non-existent objects in his ontology in "On Denoting," which introduced his theory of definite descriptions. He wrote *Principia Mathematica* with Alfred Whitehead.  
ANSWER: Bertrand **Russell**  
<RMP Philosophy/Thought - Geoffrey Chen>