

2020 WORKSHOP: We Oughtta pRopose aKronymS aHead Of Ptime

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Packet 5

Tossups

1. **A lesbian poet with this surname wrote the anti-lynching plays *Rachel and Mara* to protest the success of *Birth of a Nation*. With William Monroe Trotter, a man with this surname co-established the pro-civil rights *Boston Guardian* newspaper. A woman with this surname married the college founder Theodore (*) Weld after watching one of his lectures. Another Quaker convert with this surname published an anti-slavery *Epistle to the Clergy of the Southern States*. Upon discovering that their brother had fathered a son named Archibald, with one of their slaves, two sisters with this surname welcomed him as a sibling and sponsored his education. For 10 points, give this surname of the Southern abolitionist sisters Sarah and Angelina.**

ANSWER: **Grimke** [accept Angelina Weld Grimke, Angelina Grimke, Sarah Grimke Weld, Archibald Grimke] <JM>

2. **At the end of this novel, two old friends sit by a window and read a poem in which the speaker claims “I stand alone” because “all else is swamped by Pharisaism.” Vladimir Nabokov controversially suggested that this novel was actually written by its author’s mistress. In this novel, a dressmaker attempts to kill herself with iodine in Room 24 of the (*) Montenegro Hotel. A witness of that suicide is the then-lover of a lawyer, whom she later kills, and is later the wife of a man who uses the nickname “Shooter,” or Strelnikov. After fleeing to the mountains, the title character of this novel is captured by the Forest Brotherhood, a group of Bolsheviks. Yuri has an affair with Lara in, for 10 points, what novel by Boris Pasternak?**

ANSWER: **Doctor Zhivago**

3. **A group of plants that arose during *this* geological period had a unifacial cambium and bore leaves on their trunks to compensate for a lack of secondary phloem. Fossil records of those “scale trees” transition to tree ferns during the habitat fragmentation caused by this period’s rainforest collapse, which drove the replacement of land-based amphibians by amniotes. Megafauna like *Arthropleura* and (*) *Meganeura* were supported by the elevated atmospheric oxygen levels of this period. An inability to decompose newly evolved lignin during this period caused increased carbon sequestration in the form of large amounts of wood. For 10 points, name this heavily forested geological period named for its extensive coal beds.**

ANSWER: **Carboniferous** period [anti-prompt on Pennsylvanian or Mississippian] <GH>

4. **The finale of a piece in this genre begins with the following melody, which is doubled a third below: “F-sharp [pause] G, G, A, F-sharp.” The original slow movement of one of these pieces was reused in the piece *Souvenir d’un lieu* [soo-ve-NEER dun lyuh shehr] *cher*. Two attempts at slow movements for a piece in this genre were published as *Romances* in F and G. The “Adagio” of one of these pieces is in the flat mediant of F and begins with a long oboe melody. A D-major piece in this genre transitions directly into the finale from its G-minor (*) “Canzonetta.” Johannes Brahms’s piece in this genre was written for Joseph Joachim [YAW-khim] . Beethoven’s piece in this genre begins with soft quarter notes played by the timpani alone. For 10 points, what orchestral works are played by soloists like Hilary Hahn and Itzhak Perlman?**

ANSWER: **violin concertos** [or violin concerti; prompt on partial answer] <EF>

5. This religion holds that bodily activity causes the soul to receive an “influx” of particles, which are then “bound” to it, as two of its seven ontological principles. Thinkers of this religion developed a logic based on statements like “in some ways, it is, it is not, and it is indescribable,” organized in a sevenfold scheme. A motto of this religion, “Souls render service to one another,” makes use of its term for “living matter,” or (*) *jīva*. This religion acknowledges the partiality of all viewpoints in its principle of “many-sidedness” or *ane-kānta-vāda*. In this religion, only the three dogmas of right knowledge, right faith, and right conduct lead to *moksha*. Many of this religion’s principles were laid out by its twenty-fourth *tīrthankara*, Mahavira. For 10 points, name this Indian religion that focuses on nonviolence, or *ahimsa*.

ANSWER: Jainism <JR>

6. These features are “grafted” into new places in a traditional agricultural practice from the Baltistan region. One of these features adjoins a lagoon, thus creating the “Diamond Beach” area. One of these features in New Zealand was named for Emperor Franz Josef of Austria by its German discoverer. “A letter to the future” written by Andri Snaer Magnusson was appended to a grave for one of (*) these features in an August 2019 “funeral.” Paternoster and kettle lakes form in regions where these features have been active. Features of this type like Vatnajökull and Langjökull make up 11% of the surface area of Iceland. For 10 points, name these features that produce landforms like drumlins and moraines and name a national park on the Montana–Canada border.

ANSWER: glaciers <JM>

7. In higher dimensions, the degeneracy of this model system can be derived using the combinatorial method of “stars and bars”. The partition function of this system is a geometric series whose sum gives two over a hyperbolic sine. This system’s mean occupation number has the same form as the Bose–Einstein distribution. At high temperatures, an ensemble of these systems in 3D has a (*) specific heat equal to three- N times k -sub- B . Each atom behaves like this system in Einstein’s model of a solid. At low temperatures, this system’s mean energy is one-half times h -bar times angular frequency, which is its ground state energy. For 10 points, name this system whose potential energy is one-half- k x -squared, like classical systems that obey Hooke’s law.

ANSWER: quantum harmonic oscillator [or QHO; prompt on partial answers; do NOT accept or prompt on answers containing the words “simple” or “classical”] <JS>

8. The Fijian soldier Talaisi Labalaba is best known for heroically dying at a battle in this country at which insurgents nicknamed “adoo” were decisively defeated. This country’s ruler kept slaves in a palace at Salalah before being deposed in a 1970 coup. In that coup, this country’s current ruler shot Breik al-Ghafri, the governor of a region that rebelled against this country under the Chinese-backed PFLOAG [pronounce each letter]. This country’s monarch, the successor of (*) Sa’id bin Taymur, enlisted Iranian help to defeat Marxist rebels in Dhofar. This country’s majority Ibadi Muslim sect spread to this country’s colonies, which included much of the Swahili coast, in the nineteenth century. For 10 points, name this country where the name of the successor to Sultan Qaboos bin Sa’id is hidden in an envelope in Muscat.

ANSWER: Sultanate of Oman [accept Salṭanat ‘Umān, Muscat and Oman] <ZK>

9. In one short story, a six-foot-tall one of these animals intimidates extortionists at Big Bear Trading into returning a loan to Mr. Katagiri’s bank. One of these animals explodes into insects after battling an enormous worm in a quest to save Tokyo from an earthquake. After translating a French version of a story titled for one of these animals back into English, the author called it (*) “Clawed Back into a Civilized Language Once More.” The narrator of a short story seeks information about Reverend Leonidas from Simon Wheeler, but is instead told about quail shot being poured one of these animals’ throats. “The sound of water” follows one of these animals jumping into a pond in a haiku by Bashō. For 10 points, name these animals, a “Celebrated Jumping” one of which titles a short story by Mark Twain.

ANSWER: frogs <CMA>

10. **This figure won one fight by shouting that the opponent’s charioteer and horses had fallen into a valley as a distraction. Thomas Kinsella attested that this figure could suck one eye in so deep that a crane couldn’t reach it, while the other would fall on this cheek. An entire army faced this man in single combat, culminating in him cutting his weapon out of the dead body of his foster brother (*) Ferdiad while repelling a táin.** This man accidentally killed his son Connla, whom he fathered with Aífe [EE-feh] after learning to wield one weapon with his foot under the tutelage of Scathach [SKA-hakh]. After showing up late to a feast for Conchobar mac Nessa, this son of Lugh kills a guard dog and is forced to take its place. For 10 points, name this Irish hero and wielder of Gáe Bulg [gey BOOL-ge] who defended Ulster during the Cattle Raid of Cooley.

ANSWER: Cú Chulainn [“koo HUL-in”] [accept Sétanta] <EL>

11. **A 1906 Picasso painting depicts one of these animals next to a nude girl plaiting her hair and a nude boy with a jug on his head. Picasso also cast a wicker basket in bronze to make a sculpture of this animal. The right-hand side of Matisse’s *The Joy of Life* features three of these animals against a patch of orange. This animal plays the violin in paintings like *The Bride by an artist who showed himself painting a red one in Self Portrait with (*) Seven Fingers*. One of Goya’s *Black Paintings* depicts a *Witches’ Sabbath* presided over by a “Great” one of these animals. In the work *Monogram*, Robert Rauschenberg put a tire around one of these animals. For 10 points, what animal is shown being milked on top of a sheep’s face and across from a green-faced man in Marc Chagall’s *I and the Village*?**

ANSWER: goats [accept gender or age-specific names like nannies, billies, or kids; prompt on demons or Satan] (The first painting is Picasso’s *Girl With a Goat*.) <SdL>

12. **The construction first used to formally define *this* set is generalized in the process of localization. Algebraic number theorists frequently study the class groups of finite extensions of this set, which are called algebraic number fields. This set is the smallest ordered field and the smallest field of characteristic zero. Single elements of this set are used to approximate other numbers in (*) Diophantine approximation.** Nonempty proper subsets of *this* set that are downward closed and have no greatest element, called Dedekind cuts, are used to construct the real numbers. This field is given by adjoining, to the integers, multiplicative inverses of all nonzero elements. For 10 points, name this field consisting of all quotients of integers, represented by fractions.

ANSWER: rational numbers [or rationals; or Q] <GH>

13. **A 2009 article by Darrell Miller proposes treating these things “as smut” through a so-called “home-bound” approach. The majority opinion in a Supreme Court case involving these things hinged on a distinction between the “operative” and “prefatory” portions of a certain text. In a 2013 ruling in *Moore v. Madigan*, Richard Posner wrote that it was “arbitrary” to distinguish between the possession of these things inside and outside of one’s (*) home. The Supreme Court overturned a ban on these things in *District of Columbia v. Heller*, arguing that the founders did not intend their ownership to be tied to service in a militia. For 10 points, name these objects that are the central focus of Second Amendment jurisprudence.**

ANSWER: guns [accept equivalents like firearms; prompt on weapons or arms] <WHM>

14. A church in this city has an undulating façade and an oval-based floor plan to fit its cramped site. The dome of that 1630s church in this city is coffered with interlocking crosses, hexagons, and octagons. A sculpture in this city supposedly averts its eyes out of fear that a rival's nearby church will collapse onto him. A corkscrew-shaped lantern tops a church in this city named for Saint Ivo, and it's also home to San Carlo alle Quattro Fontane. One man holds an (*) oar while another man sits on a pile of coins in a sculpture in this city's Piazza Navona. Francesco Borromini worked almost entirely in this city, where a monument features an Egyptian obelisk behind a blindfolded personification of the Nile. For 10 points, what city is home to Gianlorenzo Bernini's *Fountain of the Four Rivers*?

ANSWER: Rome [or Roma] <ES>

15. The narrator of this novel works as a servant on the Rue Lafayette for the Hindu Nanantatee, who pays for everything with the "string of fat pearls around his neck." Objects of the narrator's affections in this novel include a Russian woman with "the clap," and a woman of whom he says "I make your ovaries incandescent." George Orwell wrote that this novel "[gives] you an idea of what can still be done, even at this late date, with English prose" in his essay (*) "Inside the Whale." The narrator's wife Mona is based on the author's ex-wife June, and this novel's preface is written by the author's onetime lover Anais Nin. This novel was originally published in France in 1934 but was banned in the United States until 1961. For 10 points, name this novel about Bohemian life in interwar Paris written by Henry Miller.

ANSWER: Tropic of Cancer <JMA>

16. In this region, patriarchs of four generations were able to legitimize bastard sons and daughters in the *cenedd* [ken-edle] system of partible inheritance. The French *bastide* model of town planning was adapted to build a string of fortified cities in this region in the thirteenth century. Much of what we know about this region's religious hierarchy is recorded in its namesake Triads, which include the White Book of Rhydderch [ruth-erch]. The Savoyard architect (*) James of St. George was hired to build a string of castles to consolidate control of this region. People in this region's namesake Marches were conscripted to build an earthwork separating it from Mercia by the Mercian king Offa. For 10 points, identify this region ruled by Prince Llwelyn the Last before it became an English territory.

ANSWER: Wales [or Cymru [CUM-ree]; anti-pprompt on things like Kingdom of Gwynedd until read and County of Powys] <ZF>

17. *Description acceptable.* Combining sigmoidal examples of *these* curves at different starting conditions generates a plot of the speed of the transition from austenite to bainite or pearlite, known as a TTT diagram. For a van der Waals gas, a horizontal line replaces an oscillatory portion of one of these curves in Maxwell's equal-area construction. The work done by an ideal gas along one of these curves is proportional to the (*) logarithm of the ratio of the final and initial volumes. Two adiabats and two of these less-steep curves make up the Carnot cycle. For an ideal gas, internal energy is constant along these curves. These curves result from a system being in constant contact with a heat bath. For 10 points, name these curves on phase diagrams along which temperature is constant.

ANSWER: isotherms [accept word forms; accept answers indicating T or temperature is being held constant along the curve until mentioned; prompt on answers about curves on phase diagrams that don't mention temperature] <AF>

18. According to the chronicle of John Malalas, this emperor ordered Alexandria sacked until blood reached the knees of his horse, but spared the city when his horse tripped. That event ended the revolt of Lucius Domitius Domitianus in response to one of this emperor's tax reforms, which established the *capitatio* and *jugum*. This emperor created the Jovians and (*) Herculians to supplant the Praetorian Guard. He later found the time to mediate a settlement between his successors at Carnuntum, despite having retired to farm cabbages in Dalmatia. This man failed to check inflation with an edict imposing price controls and ordered the last great persecution of Christianity. For 10 points, name this Roman emperor who ended the Crisis of the Third Century and established the Tetrarchy.

ANSWER: Diocletian [accept Gaius Aurelius Valerius Diocletianus Augustus; accept Diocles] <KF>

19. This book describes a gesture of abnegation followed by a return to that which was given up, which it calls a “double-movement.” This book rhetorically asks what life would be like without “eternal consciousness.” This “dialectical lyric” was published in late 1843 alongside three *Upbuilding Discourses* and the book *Repetition*. This book gives four different versions of the same story after describing a naïve man in its opening (*) “Exordium.” The first of this book's three “problemata” asks if there is a “teleological suspension of the ethical.” Abraham is contrasted with the “knight of infinite resignation” and described as a “knight of faith” in—for 10 points—what work about the sacrifice of Isaac, by Søren Kierkegaard?

ANSWER: *Fear and Trembling* [or *Frygt og Bæve*] <CM>

20. In this novel, Madox kills himself in a warhawk church in a subversion of this novel's multiple deaths in “holy places.” In this novel, spies use the novel *Rebecca* to pass on messages. A sapper in this novel meets his future lover while she is playing the piano. This novel includes a man who is arrested for stealing a camera from a woman's room and later has his (*) thumbs cut off by Ranuccio Tomassoni. A character in this novel who keeps a copy of Herodotus' *Histories* with him promises Katharine Clifton that he will return to the Cave of Swimmers. This novel's title character recovers from burns in an abandoned villa during World War II. For 10 points, name this novel about the nurse Hana and Lázló Almásy, written by Michael Ondaatje.

ANSWER: *The English Patient* <WG>

2020 WORKSHOP

Packet 5

Bonuses

1. When asked if this character was real, his creator replies, “How real is life? How real is hate that poisons life?” in *O Mostrengo*, which is a section of verses dedicated to this character. For 10 points each:

[10] Name this spirit who tells the protagonist, “No matter how many vessels attempt the audacious passage you are plotting, my cape will be implacably hostile.”

ANSWER: **Adamastor**

[10] Adamastor is the title character of *O Mostrengo*, which is part of this poet’s book *Mensagem*. This creator of several “heteronyms” wrote *The Book of Disquiet*.

ANSWER: Fernando **Pessoa** [or Fernando António Nogueira **Pessoa**]

[10] Vasco da Gama encounters Adamastor in this country’s national epic, *The Lusiads*. Fernando Pessoa is from this Iberian country.

ANSWER: **Portugal** [or the **Portuguese Republic** or **República Portuguesa**] <CMA>

2. A planned merger of this financial institution with one of its main domestic rivals, Commerzbank, fell through in April of 2019. For 10 points each:

[10] Name this financial institution that was one of the key drivers of the collateralized debt obligation market in the lead-up to the 2008 financial crisis, paying major fines for its creation of CDOs like Gemstone VII [“seven”].

ANSWER: **Deutsche** Bank

[10] Deutsche Bank has more recently come under fire for its role in financing *this* construction project, which originates in the Bakken formation and was completed in 2017.

ANSWER: **Dakota Access** Pipeline

[10] German police raided Deutsche Bank offices in late 2018 based on revelations in *this* set of leaked documents from the law firm Mossack Fonseca, which is located in the namesake Central American country.

ANSWER: **Panama Papers** <CS>

3. One of these functions on a sphere can be extended to the whole ball it contains by Alexander’s Trick. For 10 points each:

[10] Name these continuous bijections between topological spaces. They preserve topological invariants like the genus.

ANSWER: **homeomorphisms** [or **homeomorphic**; do NOT accept or prompt on “homomorphic”]

[10] This Swiss mathematician names a quantity equal to [read slowly] “2, minus: 2 times the genus of an orientable surface. He also originated graph theory with the Seven Bridges of Königsberg

ANSWER: Leonhard **Euler** [or **Euler characteristic**]

[10] With his student Gustav Roch, this mathematician names a result often summarized as “dimension minus correction equals degree minus genus plus 1.” That theorem co-named for him is a key result of algebraic geometry and was extended into incomprehensibly general terms by Grothendieck.

ANSWER: Bernhard **Riemann** [accept **Riemann**–Roch theorem or Grothendieck–**Riemann**–Roch theorem] <VF>

4. Joseph Schumpeter used this term to describe the earnings of entrepreneurs that occur between an innovation's introduction and its diffusion. For 10 points each:

[10] Name this term from economics that refers to the difference between the total return to a factor of production and its supply price.

ANSWER: economic **rent**

[10] Rent originally referred to income derived from ownership of *this* factor of production. The concept of the "tragedy of the commons" derived from a study of shared usage of *this* factor of production in England.

ANSWER: **land** [prompt on natural resources or property, but do not accept or prompt on specific natural resources that are not land, like water]

[10] This political scientist's book *Governing the Commons* argued that a system of polycentrism with a plurality of interdependent decision-making centers would solve the tragedy of the commons.

ANSWER: Elinor (Claire) **Ostrom** <GE>

5. For 10 points each, answer the following about the influence of classical writers on American political rhetoric.

[10] In 2014, this man delivered a version of Cicero's *In Catilinam* with Obama's name in place of Catiline's. This man read *Green Eggs and Ham* during an anti-Obamacare filibuster that caused a government shutdown.

ANSWER: Ted **Cruz** [accept Rafael Edward **Cruz**]

[10] The Gettysburg Address was more loosely inspired by a funeral oration given by *this* man during the Peloponnesian War, which also begins by praising the dead and relating their deaths to the survival of the state.

ANSWER: **Pericles**

[10] This Roman historian's praise of the Senate as an aristocratic check on the rights of the people heavily inspired John Adams' "A Defense of the Constitutions." This formulator of the concept of *anacyclosis* is also known for creating a grid display of letters of the alphabet often used in telegraphy and codes.

ANSWER: **Polybius** <ZK>

6. This artist instructed that her work be kept secret for twenty years after her death, inspiring the subtitle of her 2018-2019 Guggenheim exhibition, *Paintings for the Future*. For 10 points each:

[10] Name this female Swedish artist who painted a set of 193 paintings intended for a structure called the Temple, including series like *The Dove*, *The Swan*, and *The Ten Largest*.

ANSWER: Hilma **af Klint**

[10] af Klint is now recognized as among the first to create *this* kind of painting. Jackson Pollock and Willem de Kooning were painters from a movement named for this kind of "expressionism."

ANSWER: **abstract** art [or **abstraction**; or **nonrepresentational** art; or **nonobjective** art; or **non-figurative** art]

[10] Many of af Klint's early works were made using *this* technique, in which she worked without preparation or conscious thought, believing that spirits guided her. The Surrealists used this technique to access the subconscious.

ANSWER: **automatic** drawing [or **automatic** painting; or **automatism**] <GH>

7. This work includes the instruction to not eat fruit in the street in order to prevent flies from following you. For 10 points each:

[10] Name this short story that consists of a long list of instructions to the title character. It ends with the speaker asking if "after all you are really going to be the kind of woman who the baker won't let near the bread."

ANSWER: "**Girl**"

[10] "Girl" was included in *At the Bottom of the River*, a short story collection by this Antiguan author of *Lucy*.

ANSWER: Jamaica **Kincaid** [or Elaine Cynthia Potter **Richardson**]

[10] "Girl" was originally published in this magazine, which also published "A Perfect Day for Bananafish" and Shirley Jackson's "The Lottery."

ANSWER: *The **New Yorker*** <GC>

8. In a flashback from this film, a woman declares “you’ve bombed my trousers” after they were ripped in a German nightclub. For 10 points each:

[10] Name this 1957 film in which Marlene Dietrich’s character of Christine volunteers to testify against her husband Leonard, played by Tyrone Power. It ends with a voice-over telling the audience not to spoil the ending.

ANSWER: **Witness for the Prosecution**

[10] *Witness for the Prosecution* was directed by this Austrian-American filmmaker. He directed Marilyn Monroe in *The Seven Year Itch* and *Some Like It Hot*.

ANSWER: Billy **Wilder** [or Samuel **Wilder**]

[10] In Wilder’s *Sunset Boulevard*, Norma Desmond struggles to revive her career after the introduction of *this* technology. *Singin’ in the Rain* dramatizes the launch of this technology, which began with 1927’s *The Jazz Singer*.

ANSWER: synchronized **sound** [accept **audio**, **dialogue**, or other clear equivalents] <JMA>

9. The mixing time when performing spectroscopy based on this effect depends on molecule size. For 10 points each:

[10] Name this effect that is used to study the through-space correlation of protons in proteins. This effect’s strength is proportional to the inverse sixth power of distance.

ANSWER: **nuclear Overhauser** effect [or **NOE**; accept **NOESY** or **Nuclear Overhauser** Effect Spectroscopy; do **not** accept or prompt on partial answers]

[10] Information from the nuclear Overhauser effect is used to determine the 3D structure of molecules, most commonly in the proton form of *this* technique. This technique places samples in a magnetic field before applying RF pulses and reports results in units of chemical shift.

ANSWER: proton **NMR** spectroscopy [or proton **nuclear magnetic resonance** spectroscopy]

[10] Chemical shift is extended into a tensor for solid samples because *this* effect depends on the orientation of the electron cloud. This effect is the generation of a magnetic field by electrons, which can partially cancel out the applied field.

ANSWER: **shielding** [accept word forms] <JS>

10. This discipline was pioneered in a 1968 re-examination of statements made to police by the falsely accused Timothy Evans after he was executed on suspicion of murdering his wife and daughter. For 10 points each:

[10] Name this discipline which studies language in the context of legal matters, like analyzing the text of ransom demands to determine who wrote them.

ANSWER: **forensic linguistics** [prompt on partial answer; accept **legal linguistics** or **language of the law**]

[10] Forensic linguistics can be used to determine if this practice has taken place, like when linguists determined that Richard Condon copied parts of Robert Graves’ novel *I, Claudius* into his novel *The Manchurian Candidate*.

ANSWER: **plagiarism** [accept other word forms]

[10] The Flesch–Kincaid tests attempt to quantify this aspect of texts by applying a formula to the number of words, sentences, and syllables in order to calculate a “grade level.”

ANSWER: **readability** [or **reading ease** or descriptive equivalents] <CM>

11. Prior to this battle, the losing commander declared “If they won't eat, let them drink!” before throwing sacred chickens overboard. For 10 points each:

[10] Name this 249 BC naval battle in which a Roman fleet under Publius Claudius Pulcher was destroyed off the coast of Sicily.

ANSWER: Battle of **Drepana**

[10] The Battle of Drepana occurred during this conflict, the first of three conflicts between Rome and a North African city founded by the Phoenicians.

ANSWER: First **Punic War**

[10] During the First Punic War, the Roman navy introduced the use of *this* boarding device, which worked by dropping a spiked “beak” onto enemy ships’ decks.

ANSWER: **corvus** [accept **crow** or **raven**] <BH>

12. This good was first made in Europe by failed alchemist Johann Böttger [BURT-guh] in the town of Meissen [MY-sun]. For 10 points each:

[10] Name this good, knockoff versions of which were also produced in the Dutch city of Delft. This good made from Kaolin clay was a major Chinese export to Europe.

ANSWER: **porcelain** [prompt on **pottery** or **ceramics** or **China**]

[10] Porcelain exports from China increased quickly after a massive influx of silver from this Bolivian city, whose *cerro rico* mines would provide much of Spain’s money supply in the 16th through 18th centuries.

ANSWER: **Potosí**

[10] The Míng Dynasty nationalized kilns in *this* city in Jiāngxī province, which was the center of the Chinese porcelain industry. Porcelain thus became a key source of money for the imperial government after *this* city began producing custom-made pottery for the Spanish market.

ANSWER: **Jǐngdézhèn** <JM>

13. Crispin Wright revived one of this philosopher’s arguments by noting that second-order logic and Hume’s Principle by themselves are enough to prove Peano axioms. For 10 points each:

[10] Name this German philosopher, who included an appendix in the 1903 second volume of one of his books acknowledging that Bertrand Russell had found a fatal flaw in a key argument of the first volume.

ANSWER: (Friedrich Ludwig) Gottlob **Frege**

[10] Frege was one of the leading philosophers in the attempt to provide a logical grounding for *this* discipline. In a book on the *Foundations* of this discipline, Frege used the idea of “equinumerous” sets to define the word “number.”

ANSWER: **arithmetic** [accept **mathematics**]

[10] Frege tried to derive arithmetic from Hume’s Principle and *this* statement, by which two functions share a “value range” if and only if they are equal for all values. This statement was the target of Russell’s paradox.

ANSWER: **Basic Law 5** [or **Grundgesetz V**] <JR>

14. George Gamow explained alpha decay by way of this phenomenon. For 10 points each:

[10] Name this quantum phenomenon in which a particle passes through a finite potential barrier, despite not having enough energy to do so classically.

ANSWER: (quantum) **tunneling** [accept word forms]

[10] Quantum tunneling occurs because a wavefunction *must* have this property everywhere, even if the potential jumps to infinity. Ensuring this property usually entails matching a bunch of coefficients across a boundary.

ANSWER: **continuity** [accept word forms like **continuous**]

[10] Oddly, for a finite barrier of height v -naught and width a , the transmission probability does not smoothly increase as energy increases, due to a factor in the denominator of *this function* of the quantity [read slowly] “ a over h -bar times the square root of quantity: $2-m-E$ plus v -naught.” The fact that this function is periodically zero allows for occasional perfect transmission.

ANSWER: **sine squared** [accept any answer involving the **square** of the **sine** function; do not accept or prompt on partial answers or other trig functions] <VF>

15. A man in this play asks, “Do you hear the waters rushing against the shores of the coastlands?” as he drunkenly pretends to be an African warrior. For 10 points each:

[10] Name this play about the Younger family’s life in Chicago, written by Lorraine Hansberry.

ANSWER: *A Raisin in the Sun*

[10] This playwright’s *Three Views of Mt. Fuji* was first produced in the Lorraine Hansberry Theater. The choreopoem was invented by this author of *for colored girls who have considered suicide / when the rainbow is enuf*.

ANSWER: Ntozake **Shange** [or Paulette Linda **Williams**]

[10] In *for colored girls*, the Lady in Blue complains about “metal horses gnawing” on her as she does this action alone. Lena Younger is distraught that Ruth makes a down payment to do this action in *A Raisin in the Sun*.

ANSWER: **abortion** [accept **terminating pregnancy**] <CMA>

16. This movement begins with a D-minor triad on beat two of a 3/4 bar, and it includes thirty-two straight measures of thirty-second-note arpeggios that are abbreviated as halves, quarters, and eighths. For 10 points each:

[10] Name this solo-instrumental movement that takes almost thirteen minutes in Midori’s recording. This movement’s 64 four-measure variations are organized in a highly symmetrical structure.

ANSWER: **Chaconne** in D minor [or **Ciaccona**]

[10] This German composer included that Chaconne in his *Sonatas and Partitas for Solo Violin*. He also wrote six solo *Cello Suites*.

ANSWER: Johann Sebastian **Bach** [or J.S. **Bach**]

[10] *This* movement of Bach’s first cello suite opens by arpeggiating the ascending sixteenth notes “G-D-B” across three strings. Bach’s *English Suites* begin with these movements, while his *French Suites* do not.

ANSWER: **préludes** [prompt on answers like “The first movement” with “What title did he give it?”] <EL>

17. The Suez Crisis, which occurred simultaneously with this event, allowed the Soviet Union to escape scrutiny for its response to this event. For 10 points each:

[10] Name this event that sparked demonstrations out of ethnic solidarity in the Transylvanian city of Timisoara. Members of the AVH Secret Police were killed en masse as part of this event.

ANSWER: **Hungarian Revolution** of 1956 [accept any description of an **uprising** in **Hungary**]

[10] This newly-minted leader of Hungary decided to allow a funeral for Laszlo Rajk [rike] and broadcast a speech rejecting protesters' Sixteen Demands, actions which are frequently blamed for the escalation of the Revolution.

ANSWER: Ernő **Gerő**

[10] In one of the iconic images of the Revolution, protesters beheaded a statue of this leader. The Revolution began after word got out that this leader's successor, Nikita Khrushchev, had denounced him in a "Secret Speech."

ANSWER: Joseph **Stalin** <KRA>

18. Colleen Sheehan noted that the answer "Prince of Whales" with an "h" works for a riddle in this novel that the title character promptly answers with "courtship." For 10 points each:

[10] Name this novel. It features a "charade" that begins "my first displays the wealth and pomp of kings," then describes its "second" as "monarch of the seas," and lastly notes how when the two are "united," "woman reigns alone."

ANSWER: **Emma**

[10] This author unenthusiastically dedicated *Emma* to the Prince upon his "suggestion," as the Prince was a great admirer of hers.

ANSWER: Jane **Austen**

[10] The opening letters of both stanzas of the "charade" anagram to the last name of this other author. This writer collaborated with his sister Mary on *Tales from Shakespeare*.

ANSWER: Charles **Lamb** <RZ>

19. Levothyroxine is among the most prescribed medications in part because it treats one of these *two* diseases directly and can deal with the tendency of radiotherapy and surgery to overcorrect in the other. For 10 points each:

[10] Name these *two* disorders which can both cause goiters. The tendency of autoimmune disorders to trigger each other means that having one of these disorders predisposes one for the other, despite their opposing effects.

ANSWER: **Hashimoto's** disease [or **Hashimoto's** thyroiditis]

Graves' disease

[10] Patients with Hashimoto's frequently have auto-antibodies to an enzyme of *this* kind that generates iodide radicals. A set of selenium-containing enzymes of this kind are responsible for converting T₄ to T₃.

ANSWER: **peroxidases** [accept thyroid **peroxidase**, anti-thyroid **peroxidase** antibodies, or iodine **peroxidase**; prompt on iodothyronine or iodotyrosine **deiodinases**; prompt on **TPO** or anti-**TPO** antibodies]

[10] Hashimoto's disease is often accompanied by weight gain and Graves' by weight loss because the thyroid regulates the rate of *this* general process, which includes "pathways" like respiration and fatty acid biosynthesis.

ANSWER: **metabolism** [accept word forms; accept basal **metabolic** rate; prompt on **BMR**] <GH>

20. The festivals Qīxī [chee shee], Chilseok, and Tanabata celebrate the reunion of these *two* figures. For 10 points each,

[10] Name this couple who are only allowed to meet once per year, since their marriage was forbidden.

ANSWER: **Cowherd** [or **Niú Láng** or **Gyeonwu** or **Hikoboshi**; accept anything describing a **male** who herds **cows**] **Weaver Girl** [or **Zhī Nǚ** or **Jiknyeo** or **Orihime**; accept anything describing a **female** who **weaves**]

[10] On the seventh day of the seventh month, magpies build the bridge that the Cowherd and the Weaver Girl use to cross *this* river-like celestial feature. In Greek myth, this feature was created when Hera breastfed Heracles.

ANSWER: **Milky Way** [or **yínhéxì** [yeen-huh-SHEE] or **yínhàn** or **tiānhàn** or **xīnghé** [SHEENG-huh]]

[10] In Chinese myth, *this* figure was married to the Queen Mother of the West, who both created the Milky Way and separated the Cowherd from the Weaver Girl. This figure is the ruler of heaven in Daoist mythology.

ANSWER: **Jade Emperor** [or **Yù** Huáng Dà **Dì**] <EL>

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