



2022 Intercollegiate Championship  
Tournament (Division I)  
Packet 1

Questions

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1. **The chief deity of Sesesh [SEH-sesh] had this animal form and was named Bat [baht]. In the *Pyramid Texts*, the pharaoh meets two black examples of this animal after he is reborn. A goddess with this form was worshiped at Dendera and wore a *menat* necklace. The eight Heh gods are shown supporting Nut [noot], who takes this form, in a (\*) "book" titled for a "heavenly" one. The lion-headed Sekhmet is a form of Hathor, who has the head of—for 10 points—what animal, allowing her to hold a uraeus [yoo-REE-uss] between her horns?**

answer: cow(s) (accept cattle; accept The Book of the Heavenly Cow; prompt on "bovine(s)"; do not accept or prompt on "bull(s)")

<424831>

1. The last line of this poem repeats words like "pleasing" and "prince" from its first line. For 10 points each —  
A. Name this poem in which a man loses the title object and dreams that it is reborn as a woman on the far bank of a stream.

answer: Pearl (or Perle)

- B. The anonymous Pearl Poet is also thought to have written this poem, whose title characters are a member of King Arthur's Round Table and the spirit who ensnares him in a "beheading game."

answer: Sir Gawain and the Green Knight

- C. The Pearl Poet may have also written this 14th-century poem, in which a corpse found underneath St. Paul's Cathedral tells its life story to the title bishop.

answer: St. Erkenwald

<540717>

2. **Betty Meggers argued that civilization was impossible in this region in a book calling it a "counterfeit paradise." That book claims this region's *várzeas* [VAR-zay-ahs] were densely populated. Plants adapted to poor soil live in this biome's ["BY"-ohm's] *campinarama* [cahm-pee-nah-RAH-mah] areas. A 4,000-kilometer highway spanning this region passes through (\*) Tocantins [toh-CAHN-teens] and ends at Paraíba [pah-rah-EE-bah] in the east. The tea-like color of a river in this biome led Francisco de Orellana [oh-ray-YAH-nuh] to name it the Río Negro. For 10 points—Manaus [mah-NAH-oos] is a city in what rainforest?**

answer: Amazon rainforest (or Amazonia or Amazonas or Amazon basin; accept Amazonia; Man and Culture in a Counterfeit Paradise or Trans-Amazonian Highway; prompt on "(tropical) rainforest" before "rainforest")

<443980>

2. This theorist coined the term “holding environment” to describe the role of the therapeutic setting. For 10 points each—

A. What pioneering object-relations theorist posited the “true and false self” and the “transitional object”?

answer: D. W. Winnicott (or Donald Woods Winnicott)

B. Winnicott wrote a book titled for this behavior “and reality.” The “deep” form of this usually recreational activity titles a Clifford Geertz essay on cockfighting.

answer: play(ing) (accept answers indicating playing games; accept Playing and Reality or Deep Play; Notes on the Balinese Cockfight)

C. Winnicott argued that the “ego-relatedness” stage enables the development of this capacity, which is crucial to avoid “false life.” Paradoxically, this ability develops in the “presence of the mother.”

answer: capacity to be alone (or solitude; or be by one’s self; prompt on “independence”; do not accept or prompt on “loneliness”)

&lt;556834&gt;

3. **After Robert LaFollette and George W. Norris, this man was the third presidential candidate from the Farmer-Labor Party, running in 1932 and 1936. This man’s earlier followers sought the passage of a “Non-interest Bearing Bond Bill” and “Good Roads Bill.” This head of the (\*) “Commonweal of Christ”** joined with Carl Browne to lead a group of unemployed men on a 300-mile march from Massillon [MASS-ih-lun] to Washington, D.C. For 10 points—name this Ohio businessman whose namesake “army” protested the Panic of 1893.

answer: Jacob Coxey (accept Coxey’s Army)

&lt;530939&gt;

3. In this film, Max’s wife Kim notices that the protagonist is wearing the same fancy bracelet that Max bought for her. For 10 points each—

A. Name this 2020 comedy by Emma Seligman about a young Jewish woman named Danielle attending an event honoring a recently deceased relative.

answer: Shiva Baby

B. Danielle’s father is played by actor Fred Melamed, perhaps best known for portraying Sy Ableman, the title character of this 2009 film set in St. Louis Park, Minnesota.

answer: A Serious Man

C. Seligman has cited these directors of *A Serious Man* and *Inside Llewyn Davis* as an influence on *Shiva Baby*.

answer: Coen brothers (or Coens; or Joel and Ethan Coen)

&lt;553720&gt;

4. **A character asks his “master” why this figure appears upside-down and how the “sun made his transit” so quickly. Dorothy Sayers suggested that this figure’s red, yellow, and black coloration represents the human races. The waist of this lord of Giudecca [joo-DEK-kah] is surrounded by the (\*) icy river Cocytus [koh-“SIGH”-tuss].** Two men grasp this figure’s hair and climb down his body, emerging in the Southern Hemisphere. In Canto 34 of the *Inferno*, Dante [DAH-n-tay] and Virgil [VUR-jil] encounter—for 10 points—what three-faced giant arch-traitor?

answer: Lucifer (or Lucifero; or Dis; or Beelzebub; accept Satan; prompt on “(the) Devil”)

&lt;504581&gt;

4. A character in this story commits suicide with pills and sherry after discovering that her lover has taken Madge to a restaurant. For 10 points each—

A. Name this short story that begins “John and Mary meet—what happens next?” and imagines six possible outcomes.

answer: Happy Endings

B. “Happy Endings” is by this Canadian author of *The Handmaid’s Tale*.

answer: Margaret (Eleanor) Atwood

C. This Atwood novel cuts between Iris Chase Griffen’s present life, her past life, and the title novel-within-a-novel, which is credited to her sister Laura.

answer: The Blind Assassin

&lt;530868&gt;

5. **An album titled for this musician “in Wonderland” features two tracks he wrote for the John Cassavetes [“CASS”-uh-VEH-teez] film *Shadows*. In 1989 Gunther Schuller revised and premiered a this artist’s two-hour long composition *Epitaph*. This bandleader worked with Horace Parlan and Dannie Richmond in his “Jazz Workshop.” He mocked the (\*) racist governor of Arkansas in “Fables of Faubus,” but the lyrics were removed from an album whose title follows his name with the words “Ah Um.” For 10 points—name this jazz bassist.**

answer: Charles Mingus (accept Jazz Portraits: Mingus in Wonderland or Mingus, Ah Um)

&lt;318658&gt;

5. This criterion is superseded by the Ledoux [leh-DOO] criterion in the presence of composition gradients. For 10 points each—
- A. Name this criterion that predicts instability when the temperature gradient in a stratified fluid is super-adiabatic [AY-dee-uh-BAT-ik].

answer: Schwarzschild [SHWARTS-“shield”] criterion

- B. In terms of the gravitational constant  $G$ , speed of light  $c$ , and mass  $M$ , what is the Schwarzschild radius for a black hole of mass  $M$ ?

answer:  $2GM/c^2$  [“two G M over c squared”]

- C. The Schwarzschild telescope eliminates both coma and this other aberration that distorts images made by mirrors with a namesake shape.

answer: spherical aberration

&lt;556837&gt;

6. **Unidentified Falling Objects cause losses in one of these things and lead it to be dumped by dilution kickers that sweep it in a Lissajous [LIH-suh-zhoo] figure. The total momentum over the total charge of these things is their rigidity, a measure of how easily they can be guided by magnets. Wigglers periodically (\*) deflect these things that are kept circulating in storage rings, as seen at the Tevatron [TEV-uh-tron] and LHC. A fixed target may be struck by—for 10 points—what collimated streams in particle accelerators?**

answer: particle beams (before “dumped,” accept particle colliders or particle accelerators; after “dumped” and before “rigidity,” prompt on “(particle) collider(s)” or “(particle) accelerator(s)”; before “Tevatron,” accept proton beams or ion beams; before “streams,” prompt on “(charged) particles” with “the particles are moving as part of what things?”; before “Tevatron,” prompt with “the particles are moving as part of what things?” on “protons” or “ions”)

&lt;557563&gt;

6. This artist’s study drawings include a 72-faced polyhedron studded with diamond peaks. For 10 points each—

- A. What artist made a 15th-century drawing of a chalice that looks strikingly like a wireframe image used in modern 3D modeling?

answer: Paolo Uccello [oo-CHAY-loh] (or Paolo di Dono)

- B. Uccello’s wireframe chalice was a study for this drafting technique that depends on a vanishing point.

answer: linear perspective (or point-projection perspective; accept one-point perspective)

- C. Uccello also made a wireframe study of a *mazzocchio* [mah-ZOH-kee-oh], a doughnut-shaped type of headgear shown in his *Life of Noah* frescoes in the Green Cloister of this church that also contains Masaccio’s *The Holy Trinity*.

answer: Santa Maria Novella

&lt;556535&gt;

7. **In one episode of this show, a woman tells a joke on a telephone that ends with God being killed by a brick. A character on this show spells out the message “save me daughter” using the corpses of his servants. The backstory to this show involves a massacre known as the “White (\*) Night” carried out by the Seventh Cavalry, a white supremacist group. The city of Tulsa, where police officers wear costumed disguises, is the setting of—for 10 points—what HBO series based on an Alan Moore graphic novel?**

answer: Watchmen

&lt;510118&gt;

7. A portrait composed by this man shows his bearded assistant, Marcus Sparling, sitting aboard the “Photographic Van.” For 10 points each—
- A. Name this pioneer of British war photography, who founded the Photographic Society after the Great Exhibition of 1851.

answer: Roger Fenton

- B. Fenton and James Robertson photographed the siege of Sevastopol during this war.

answer: Crimean War

- C. Two versions of Fenton’s photo *Valley of the Shadow of Death* differ in the placement of these discarded items: either in the path of a dirt road, or lying in the adjacent ditch.

answer: cannon balls (or round shot or solid shot; do not accept or prompt on “cannon”)

&lt;480920&gt;

8. **An early turning point in this conflict was the Day of the Barges. This conflict ended with the sack of the city of al-Mukhtara** [ahl mook-TAH-ruh] **by the general al-Muwaffaq** [ahl mooh-WAH-fahk]. **Despite claiming to be descended from the first Shia imam, the leader of this conflict’s losing side adopted the ideology of the (\*)** Kharijites [KAR-ee-jytes] because they believed even a slave could become caliph. Ali ibn Muhammad led hundreds of thousands of rebel slaves in—for 10 points—what revolt against the Abbasids named for a region of East Africa?

answer: Zanj Rebellion (accept Zanj Uprising)

&lt;403676&gt;

8. Ali Smith’s novel *Girl Meets Boy* is inspired by the myth of this character, whose poor parents Ligdus and Telethusa could not afford a dowry. For 10 points each—

- A. Name this character who is born a girl, raised as a boy, and then prays to the gods to be transformed into a man before marrying Ianthe [EE-ann-thay].

answer: Iphis

- B. This Egyptian goddess responds to Iphis’s prayers. The syncretic deity Serapis [sih-RAY-pis] often replaced Osiris as her consort in Greco-Roman cults.

answer: Isis [“EYE”-siss]

- C. This Lapith woman was also transformed into a man, and given impenetrable skin, after being raped by Poseidon.

answer: Caeneus [kay-NEE-us] (accept Caenis)

&lt;510511&gt;

9. **Section one of this essay argues that even Bernard Mandeville understood the power of compassion by citing Mandeville’s description of a child eaten alive by a pig. Section two of this essay opens by decrying the first man who set off land with stakes and declared “this is mine.” This essay argues that humans are distinguished from animals by (\*) “perfectibility,”** which allows for the rise of *amour-propre* [ah-moor-PROP-ruh]. For 10 points—what Jean-Jacques Rousseau [roo-SOH] essay discusses the emergence of social hierarchy?

answer: Discourse on Inequality (or Discourse on the Origin and Basis of Inequality Among Men; A Dissertation On the Origin and Foundation of the Inequality of Mankind; or Discours sur l’origine et les fondements de l’inégalité parmi les hommes; accept Rousseau’s Second Discourse)

&lt;555441&gt;

9. Gary Martin’s “methods manual” for this discipline uses Brent Berlin’s classification of uses of *Rapanea* by the Tzeltal people as an example. For 10 points each—

- A. Mark Plotkin is a scholar within what interdisciplinary field that fuses biology and social science?

answer: ethnobotany (accept ethnobotanists; prompt on “ethnoecology” or “ethnoecologist(s)”)

- B. Plotkin’s wrote a book of “tales” of apprenticeship to one of these religious men who visit the spirit world in an altered state of consciousness.

answer: shamans (accept Tales of a Shaman’s Apprentice)

- C. This Peruvian-American author discussed training with a Yaqui [YAH-kee] shaman in his 1968 book *The Teachings of Don Juan*.

answer: Carlos Castaneda (or Carlos Castañeda)

&lt;506556&gt;

10. **An enzyme inhibited by zaragozic acid ligates two pyrophosphate [PYE-roh-"phosphate"] derivatives of one of these compounds. The "10" in coenzyme Q10 refers to one of these compounds attached to the quinone [KWY-nohn] ring. Derivatives of these compounds are synthesized, then later converted to (\*) steroids, in the mevalonate [meh-VAL-uh-nayt] pathway. Examples of these compounds with 15 carbons are given the prefix "sesqui [sess-kwih]." Pinene ["PINE"-een], limonene [LIH-moh-neen], and squalene [SKWAY-leen] are examples of—for 10 points—what class of lipids formed from multiple isoprene ["EYE-so-preen"] units?**

answer: terpenes (accept terpenoids; accept isoprenoids before "isoprene"; accept farnesene or farnesyl before "coenzyme Q10"; prompt on "alkenes" or "lipids" or "hydrocarbons" or "prenyl" or "isoprenyl" before "sesqui"; prompt on "isoprenoids" after "isoprene"; do not accept or prompt on "polyisoprene")

&lt;554643&gt;

10. For 10 points each—answer the following about dynamical systems:

A. This is the collection of points generated by applying a system's evolution function to a starting point. This term is also used for the path of an astronomical body through space.

answer: orbit(s) or trajectory (or trajectories)

B. Conservative systems obey this Frenchman's recurrence theorem. He lends his name to a "map" that plots the points where periodic orbits first intersect a section transverse to the system's flow.

answer: Henri Poincaré (accept Poincaré recurrence theorem or Poincaré map(s) or Poincaré section(s))

C. This type of orbit connects a saddle point to itself. Its "hetero" counterpart connects different fixed points.

answer: homoclinic orbit(s)

&lt;544536&gt;

11. **In an operetta, a character in this city tells a tale free from "all possible doubt whatever" in "I Stole the Prince." In this city, a character gives a rosary to a woman who saved her from being burned for witchcraft in the aria "Voce di donna" [VOH-chay dee DOH-nuh]. Gamelan-like music accompanies a mute young male dancer in a (\*) Benjamin Britten opera set in this city. The "Dance of the Hours" appears in the opera *La Gioconda* [lah joh-KAWN-duh], set in—for 10 points—what Italian city, the setting of Gilbert and Sullivan's *The Gondoliers*?**

answer: Venice (or Venezia) [The Benjamin Britten opera is *Death in Venice*.]

&lt;529993&gt;

11. This U.S. ambassador facilitated a meeting in which Félix Díaz [FAY-leeks DEE-ahz] allied with a general to carry out a military coup [koo]. For 10 points each—

A. Name this ambassador who was recalled shortly after he helped to arrange the "Pact of the Embassy" during the Ten Tragic Days.

answer: Henry Lane Wilson

B. Díaz and Victoriano Huerta [veek-tor-ee-AH-noh "WARE"-tah] overthrew this democratically elected Mexican president, who had earlier led the 1910 revolution that ended the Porfiriato [por-feer-ee-AH-toh].

answer: Francisco Madero [mah-"DARE"-oh] (or Francisco Ignacio Madero González or Francisco Ygnacio Madero González; accept Francisco Indalecio Madero González) [The Porfiriato was named after the dictator Porfirio Díaz, who was the uncle of Félix Díaz.]

C. A *soldadera* ["sole"-dah-"DARE"-ah] who fought for Francisco Madero may have inspired this popular revolutionary ballad about a woman who follows a military regiment "madly in love with the sergeant."

answer: La Adelita [ah-day-LEE-tah]

&lt;510766&gt;

12. **Responses to this concept from several "value spheres" are examined in a Lawrence Scaff paper on "fleeing" it. A 1983 sociology paper on the "institutional isomorphism" of similar organizations, by Paul DiMaggio and Walter Powell, is titled for this concept "revisited." This concept replaced a (\*) "light cloak" of care for material goods according to Talcott Parsons's translation of a 1905 book. For 10 points—what metaphor in Max Weber's [VAY-bur's] *The Protestant Ethic* likens modern rationalization to a prison?**

answer: iron cage (of rationality) (or stahlhartes Gehäuse; accept steel-hard shell or shell as hard as steel or steel-hard casing; accept Fleeing the Iron Cage or The Iron Cage Revisited)

&lt;439134&gt;

12. The first “journal” of this type of music notes “I have a ‘Symphony of noises’ in mind; after all, there has been a symphony of psalms.” For 10 points each—

A. Pierre Schaeffer’s *Cinq études de bruits* [SAHNK ay-TOOD day broo-EE] are what type of music that involves the recording and manipulation of sounds on a medium like tape?

answer: musique concrète [“music” kohn-KRET] (or concrete music; do not accept or prompt on “musique électronique” or “electronic music”)

B. Schaeffer’s *musique concrète* works include a symphony for this number of people, the number of channels in a monophonic recording.

answer: 1 (or solo; accept *Symphonie pour un homme seul* or *Symphony for One Man Alone*)

C. This composer applied *musique concrète* techniques to a recording of a boy soprano in his *Gesang der Jünglinge* [geh-ZAHNG dair YOONG-ling-geh]. His 1957 composition *Gruppen* [GROO-pen] calls for three orchestras.

answer: Karlheinz Stockhausen

13. **A woman in this play rejects a bribe of a jewel from her disguised brother, but a bribe of gold is taken by her mother. A man in this play asks “does the silkworm expend her yellow labors / for thee?” while holding a skull. Gratiana is the mother of this play’s protagonist, who goes by the name of Piato while working for Lussurioso, the son of the duke who poisoned his lover. (\*)** Vindice [vin-DEE-chay] is the title figure of—for 10 points—what play attributed once to Cyril Tourneur but now to Thomas Middleton?

answer: The Revenger’s Tragedy

13. The cabin in which one of these poems was written includes a plaque with the lines “over all of the hills / peace comes anew.” For 10 points each—

A. Give this title of two German romantic poems, one of which was supposedly written under an oak.

answer: Wanderer’s Nightsong (or Wandrer’s Nachtlied)

B. Those two poems titled “Wanderer’s Nightsong” were written by this German author of the novel *The Sorrows of Young Werther*.

answer: Johann Wolfgang von Goethe [GUR-tuh]

C. The line “tell, you stones, O speak, you towering palaces” opens the first entry in this cycle of 24 poems, which Goethe wrote about a journey abroad.

answer: Roman Elegies (or Erotica Romana; or Romische Elegien)

14. **A 1D model of this body can be constructed using the Herglotz-Wiechert inversion on travel-time curve data, assuming there are no LVZs. The Jeffreys-Bullen model of this body was a precursor to the PREM or “preliminary reference model” for this body. Cold slabs sometimes sink from this body’s surface past the (\*) 660 kilometer discontinuity and go all the way to the CMB or Gutenberg discontinuity, as revealed by seismic tomography.** For 10 points—name this tectonically active planet.

answer: Earth

14. Charlotte von Kirschbaum contributed significant amounts of this text, which rejects the idea of an abstract decree in its approach to the doctrine of election. For 10 points each—

A. Name this unfinished, four-volume magnum opus of Swiss theologian Karl Barth.

answer: Church Dogmatics (or Kirchliche Dogmatik)

B. Barth pioneered dialectical theology with a commentary on this long Pauline epistle addressed to churches in an Italian city.

answer: Epistle to the Romans (or Letter to the Romans)

C. In 1934 Barth wrote the essay *Nein!* in response to Emil Brunner, who had implicated Barth in an attempt to combine neo-orthodoxy with this extra-biblical argument for God.

answer: natural theology (or Natürliche Theologie)

15. **This man gave 35 defenses of God’s existence in his *Quaestiones* [kwai-stee-OH-nays] on the Book of Genesis. Like Johannes Kepler, this Minim [MIH-nim] friar wrote extensively against Robert Fludd. For connecting and distributing the works of such thinkers as René Descartes [reh-nay day-kart], this man was called the (\*) “post-box of Europe.” The Euclid-Euler [YOOK-lid-OY-lur] theorem relates perfect numbers to numbers named for this man, the first four of which are 3, 7, 31, and 127. For 10 points—what Frenchman names primes that are one less than a power of two?**

answer: Marin Mersenne (or Marin Mersennus; accept Mersenne primes)

&lt;503364&gt;

15. This scientist co-developed the CLARITY technique, which uses hydrogels to render brain tissue transparent. For 10 points each—
- A. Name this scientist whose lab at Stanford published a 2005 paper describing the use of a protein from green algae called ChR2 to precisely create depolarization-mediated currents.

answer: Karl Deisseroth [“DICE-uh-roth”]

- B. Karl Deisseroth’s work formed the basis for this field, which designs systems to manipulate the activity of neurons using light.

answer: optogenetics

- C. ChR2 is an example of the “channel” type of these proteins. In the eye, these proteins are activated by isomerization [“eye”-SAH-muh-ruh-ZAY-shun] of retinal [RET-in-al] to convert incoming photons to neural signals.

answer: rhodopsins (accept channelrhodopsins; prompt on “opsins”)

&lt;557638&gt;

16. **The protagonist of this book defies his principal by giving his own valedictorian address at his 1925 graduation. In the first chapter of this book, its narrator hallucinates giant udders when he is beaten by his mother for setting (\*) fire to his grandmother’s house. This book’s second section, “The Horror and the Glory,” relates how its narrator joins the John Reed Society and the Communist Party in Chicago. For 10 points—name this memoir about American race relations by Richard Wright.**

answer: Black Boy

&lt;513431&gt;

16. For 10 points each—answer the following about epithets referring to thunderbolts in military history:

- A. The twelfth of these largest units in the Imperial Roman Army was nicknamed *fulminata* [“fool-me”-NAH-tah] or “thunderbolt” for the insignia on its shields. These units contained 3,000 to 6,000 men.

answer: legions (or legio; accept Legio XII Fulminata)

- B. This Ottoman sultan was nicknamed “the Thunderbolt” after crushing a crusader army at the Battle of Nicopolis [nik-AH-puh-liss].

answer: Bayezid I (prompt on “Bayezid”)

- C. A man of this name known as Keraunos [keh-RAU-nohs], or “thunderbolt,” seized the throne of Macedonia after the Battle of Corupedium [kuh-rup-EE-dee-um] and murdered Seleucus [suh-LOO-kus] Nicator.

answer: Ptolemy (or Ptolemaeus or Ptolemaios; accept Ptolemy Keraunos)

&lt;463982&gt;

17. **In a concurrence in this case, Tom Clark wrote that anyone “emerging from the rash of opinions” in it might suffer from “mental blindness.” In an opinion in this case, which overturned *Colegrove v. Green*, William Brennan described six factors that determine whether a case presents a (\*) “political question.” This case considered Tennessee’s failure to perform a certain action for six decades. For 10 points—name this 1962 Supreme Court decision holding that federal courts may hear redistricting cases.**

answer: Baker v. Carr

&lt;242527&gt;

17. Warren Upham's two enduring publications are an encyclopedia of Minnesota geographic place names and a monograph that gave this body of water its name. For 10 points each—

A. What glacial lake drained south through the Traverse Gap into Glacial River Warren?

answer: (Glacial) Lake Agassiz [AGG-uh-see]

B. Louis Agassiz is the namesake of a glacier this state's Glacier National Park.

answer: Montana (accept MT ["M-T"])

C. Agassiz is the namesake of a mountain that, from Flagstaff, blocks the view of this tallest mountain in Arizona.

answer: Humphreys Peak (or Aaloosaktukwi or Dook'o'osliid; prompt on "Humphreys")

&lt;502736&gt;

18. **This disorder and the related Miller-Fisher syndrome both exhibit albumin-cytological** [al-BYOO-min "SIGH-toe-logical"] **dissociation.** *Campylobacter jejuni* ["CAMP-ill-oh-back"-tur jih-JOO-nee] **can provoke this disorder due to molecular mimicry creating anti-ganglioside** [anti-GAN-glee-oh-side] **antibodies. Unlike botulism** [BAH-choo-LIH-zum], **this disorder produces an ascending paralysis, and unlike (\*) multiple sclerosis** [skleh-ROH-siss], this autoimmune disorder affects the peripheral nervous system. Viral infections and the influenza vaccine have been linked to—for 10 points—what polyneuropathy named for two Frenchmen?

answer: Guillain-Barré [GEE-yan bah-RAY] syndrome (accept GBS)

&lt;537990&gt;

18. For functions  $f$  and  $g$  of variables  $p$  and  $q$ , this operation equals " $df/dp \, dg/dq$ " ["D-F D-P times D-G D-Q"], minus " $df/dq \, dg/dp$ " ["D-F D-Q times D-G D-P"]. For 10 points each—

A. Identify this operation named for a French physicist.

answer: Poisson bracket [pwah-SOHN "bracket"] (prompt on partial answer)

B. A variable  $A$  is a constant of motion if  $dA/dt$  ["D-A D-T"] equals the Poisson bracket of  $A$  with this quantity. It represents the total energy of a system.

answer: Hamiltonian

C. Paul Dirac introduced these constraints, whose Poisson bracket with all other constraints vanishes in a Hamiltonian system. They are distinct from primary and secondary constraints.

answer: first class constraints

&lt;536960&gt;

19. **A story collection about old age by this author ends with a story about Jean Sibelius** [ZHAWN sih-BAY-lee-us] **wishing to be buried with the title fruit. In a novel by this author of *The Lemon Table*, Tony is told "you don't get it" by a woman who he repeatedly emails to ask for Adrian's diary. This author included exam questions in the back of a novel in which (\*) Geoffrey Braithwaite tries to determine which stuffed bird inspired "A Simple Heart."** For 10 points—name this author of *The Sense of an Ending* and *Flaubert's Parrot*.

answer: Julian (Patrick) Barnes

&lt;541622&gt;

19. A man with this surname ordered the fortification of Bunker Hill. For 10 points each—

A. Give this surname of Artemas, a major-general who was made second-in-command of the Continental Army in 1776.

answer: (Artemas) Ward

B. Another man surnamed Ward, Aaron Montgomery Ward, founded a dry goods store that became one of the first of these large retailers in the U.S. and competed with Macy's and Marshall Field.

answer: department stores

C. A different Ward, Ward McAllister, popularized the notion that this many people comprised New York's high society in the Gilded Age, although McAllister's actual list contained only 150.

answer: 400

&lt;504289&gt;



20. **Ten of these people with different names form a single supply pile in the *Dominion* expansion Dark Ages. A “mage” one of these people names the first collectible miniatures game, whose system was later used for *HeroClix*. Along with cities, these people name an expansion to *The (\*) Settlers of Catan*. In a common chess opening, white moves a piece of this name on their second turn from g1 [“G one”] to f3 [“F three”]. For 10 points—what people name a chess piece that can jump over other pieces and move in an ‘L’ shape?**

answer: knights (accept Mage Knight or Catan: Cities and Knights or King's knight opening)

&lt;499410&gt;

20. In 2010 the men’s basketball team from this school won its only Big East Tournament championship. For 10 points each—
- A. Name this school, which lost in the Final Four of that year’s NCAA tournament to eventual champion Duke in a game that its star Da’Sean Butler left due to a knee injury. Jevon Carter [jeh-VAHN “carter”] later played for this school.

answer: West Virginia University (prompt on “Mountaineers” or “WVU”)

- B. That West Virginia team was coached by this man, who has coached at the school since 2007.

answer: Bob Huggins (or Robert Edward Huggins)

- C. West Virginia advanced to that Final Four with an Elite Eight upset of this top-seeded team, which was led by point guard John Wall and coach John Calipari.

answer: University of Kentucky (prompt on “UK” or “Wildcats”)

&lt;510200&gt;

21. **The extent of this region can be defined by place names known as “Grimston hybrids” and the spread of land divisions called “wapentakes” [WAH-“pen-takes”]. The “Five Boroughs” of this region, such as Lincoln and Derby [dar-bee], were conquered by Edward the Elder. This was the region north and east of a line that ran up the River (\*) Ouse [“ooze”] to Watling Street, according to the treaty between Guthrum and King Alfred. For 10 points—what region of 10th-century England took its name from the prevalence of Scandinavian judicial custom?**

answer: (the) Danelaw

&lt;558228&gt;

21. Chicago gangs are the subject of this man’s first novel, *Diversey* [dih-VER-see]. For 10 points each—

- A. Name this 20th-century American author whose novels include *Long Remember* and *Spirit Lake*, as well as one in which William Collins leads the “Raiders.”

answer: (Benjamin) MacKinlay Kantor [William Collins appears in *Andersonville*.]

- B. Kantor wrote a 1961 book titled for this historical counterfactual. Time-traveling South Africans supply AK-47s that prove decisive in this outcome in a 1992 novel.

answer: Confederacy winning the Civil War (accept answers indicating South or Confederacy or Confederate States or CSA winning the U.S. Civil War; accept If the South Had Won the War) [The second sentence refers to Harry Turtledove’s *The Guns of the South*.]

- C. Kantor’s novel *Glory for Me* was adapted for the screen as *The Best Years of Our Lives* by this playwright, whose own works include *Idiot’s Delight* and *The Petrified Forest*.

answer: Robert E(mmet) Sherwood

&lt;251919&gt;

22. **This city’s main legislative building has an enameled ceremonial door, whose lower half depicts the Tree of Knowledge on green tiles. Open rectangular sections show solar movement in this city’s Tower of Shadows. Sculptures made of recycled waste are found in this city’s rock garden, founded by Nek (\*) Chand. Albert Mayer and Maciej Nowicki [MAY-shitch NOH-vuh-kee] worked on this planned city, which includes the Open Hand Monument. Le Corbusier [luh kor-boo-zee-ay] helped to design—for 10 points—what capital of Haryana [HAH-ree-AH-nah] and Punjab [POON-jahb] in India?**

answer: Chandigarh [CHUN-dee-gur]

&lt;530632&gt;

22. Greece protested a treaty between Turkey and this country that would have established an exclusive economic zone. For 10 points each—

A. A “Government of National Accord” created after a 2011 NATO intervention signed that treaty on behalf of what North African country?

answer: Libya

B. Turkey defended the treaty via this state-run news agency that, like state broadcaster TRT, is a mouthpiece for the ruling AKP.

answer: Anadolu Agency (or Anadolu Ajansi; prompt on “AA” or “Anatolian (Agency)”) <552664>

C. In 2021 the deal was voided in Libya as incompatible with the United Nations convention that establishes a legal framework for maritime activities, which is almost always known by this six-letter acronym.

answer: UNCLOS [UNN-klahss or “U-N-C-L-O-S”] (accept UNCLOS III) [which stands for “United Nations Convention on the Law of the Sea.”] <553209>

23. **The U.S. special envoy to this country, Daniel Lewis Foote, resigned in 2021, citing the “inhumane” policies of the Biden administration. In a resignation letter, State Department official Harold Koh criticized the use of Title 42 against people from this country. Thousands of migrants, mostly from this country, (\*) camped under a bridge in Del Rio, Texas in September 2021. For 10 points—name this country whose nationals were given temporary protected status in the U.S. after a 2010 earthquake.**

answer: Haiti (or Republic of Haiti or Republique d’Haïti or Repiblik d’ Ayiti) <553209>

23. These lifeforms are made from skin and cardiac muscle cells and designed using evolutionary algorithms. For 10 points each—

A. Name these synthetic lifeforms developed in 2020 by a team including Sam Kriegman and Douglas Blackiston.

answer: xenobots [ZEE-noh-bots]

B. The first xenobots were created using cells from *Xenopus laevis* [ZEN-uh-puss LAY-viss], the “African clawed” species of this animal.

answer: African clawed frog(s) (accept African clawed toad(s))

C. This two-word phrase refers to the way that the xenobots were designed via computer simulation. This phrase is modeled on similar phrases like *in vivo* and *in vitro*.

answer: in silico <553243>

24. **People of this ethnicity built walled villages with *tulou* [“too-low”] houses. These people’s “hill songs,” also called “nine airs and 18 tunes,” reflect a likely origin in the Central Plain. Coasts depopulated by imperial edict were re-settled by these people, giving them the name “guest families” during the (\*) Kangxi [kahng-shee] era. Immigrants of this ethnicity in Mauritius and Singapore feuded with countrymen who spoke Cantonese. Sun Yat-Sen [soon-yaht-sen] and Hong Xiuquan [hong shoo-chwahn] were members of—for 10 points—what Southern Chinese ethnicity?**

answer: Hakkas (or Hakka Han; accept guest families or guest family or guest households before “guest”; prompt on “Chinese” or “Han Chinese” before “Chinese”; do not accept or prompt on “Hokkien” or “Cantonese”) <422536>

24. The first poem in this collection, “Arrival at Santos,” opens with the line “here is a coast; here is a harbor.” For 10 points each—

A. The title poem of what 1965 book opens “there are too many waterfalls here”?

answer: Questions of Travel [by Elizabeth Bishop]

B. Elizabeth Bishop’s *Questions of Travel* was inspired by her travels to this country. The line “I hate traveling and explorers” opens a memoir by a different author that documents work and travel primarily in this country.

answer: Brazil (or Federative Republic of Brazil or República Federativa do Brasil)

C. This anthropologist wrote “I hate traveling and explorers” in *Tristes Tropiques* [treest troh-peek], which he wrote seven years before *The Savage Mind*.

answer: Claude Lévi-Strauss [lay-vee-“STRAUSS”] (do not accept or prompt on partial last names) <502075>