2016 Terrapin XXIX: Lead Can't Penetrate Steele

Packet 11

Edited by Jordan Brownstein and Billy Busse

Questions by Jordan Brownstein, Billy Busse, Weijia Cheng, Naveed Chowdhury, Justin Hawkins, Will Kunkel, Ophir Lifshitz, Ani Perumalla, Sam Rombro, Jason Shi, Emma Stevens, Tanay Wakhare, and Sarang Yeola

## **Tossups**

1. London brewers sparked an international incident by attacking a general infamous for flogging upperclass women of this non-Filipino national group and hanging its thirteen "martyrs." Nobles of this ethnicity offered passive resistance to officials nicknamed Bach's Hussars. A sweeping reform package called the April Laws began a revolt of this national group that was suppressed by Baron von Haynau and Josip Jelačić ("YAY-la-cheech"). The territories of this national group were dubbed (\*) Transleithania after an 1867 compromise negotiated by Ferenc Deak called the Ausgleich. This national group's 1848 revolution was led by Lajos Kossuth ("LYE-ohsh KOH-shoot") against Franz Josef I. For 10 points, identify this national group, also called the Magyars, whose namesake country formed a dual monarchy with Austria.

ANSWER: **Hungarians** [or **Magyars**]

<JB European History>

2. A character created by this author sprinkles a woman with a drug that makes 600,014 dogs urinate on her. That character of this author gives a lengthy speech in praise of debts and throws a sheep off a ship, causing the rest of the flock and its owner to jump off and drown. Locations featured in a novel by this author include a sea of frozen words and an island inhabited by sausages who worship a mustard-defecating pig. In a book by this author, a war between cake-sellers and shepherds is followed by the (\*) construction of a place whose rule is "do what thou wilt," the Abbey of Thélème. This author created the Holy Bottle oracle, which proclaims "trinc!" when consulted on whether Panurge should marry. For 10 points, name this 16th-century French satirist who created the gluttonous father and son pair of giants Gargantua and Pantagruel.

ANSWER: François <u>Rabelais</u> <JB European Literature>

3. Flysch and molasse accumulate in structures that form ahead of and parallel to these events; those structures, which become folded due to décollement, are called foreland basins. The geometry of this process can be explained using a "critically tapered wedge." Granitic batholiths are usually formed during this process. These events occur in a cyclical fashion in which material is deposited into a geosyncline, then deformed and metamorphosed, and finally (\*) uplifted back towards the surface and subjected to erosion. This process, which occurs in namesake "belts," is aided by isostasy, which causes a layer of crust to rise after the collision of two tectonic plates. For 10 points, name these geologic events which form mountains.

ANSWER: orogeny [or orogenesis; accept mountain formation until it is read, but prompt afterwards; prompt on

ANSWER: <u>orogeny</u> [or <u>orogenesis</u>; accept <u>mountain formation</u> until it is read, but prompt afterwards; prompt or answers indicating the <u>collision</u> of two tectonic <u>plates</u>]

<SR Other Science (Earth Science)>

- 4. This concept involves the "dynamics of non-decision making" according to a Bachrach and Baratz paper that examines the differing ways sociologists and political scientists study it, its "two faces." A book coauthored by Robert Keohane and partly titled for this concept argues that its use is declining and being replaced with "complex interdependence." This concept was argued to be diffused between various groups in a pluralist study of New Haven politics by Robert (\*) Dahl. The ability to get results through attraction is the "soft" form of this concept theorized by Joseph Nye. In the international system, countries attempt to distribute military capabilities to create a "balance" of this concept. For 10 points, C. Wright Mills theorized an "elite" named for what concept, which a person or state holds if it can force another to act in accordance with its intentions? ANSWER: <a href="mailto:power">power</a> [or more specific answers like soft <a href="power">power</a>; prompt on answers like <a href="mailto:war">war</a> or military <a href="mailto:force">force</a> <a href="mailto:JB Social Science">JB Social Science</a>>
- 5. A man of this ethnicity created the Federal Alliance of Land Grants, whose members raided a courthouse to arrest and try a district attorney. In Denver, the Crusade for Justice was founded by a poet of this ethnicity nicknamed "Corky." A group of this ethnicity named for their colorful berets formed during some 1968 "blowout" protests in which students of this ethnicity walked out of schools. The organization (\*) MECha advocates for this ethnicity, guest workers of which were brought to the US to deal with a farm labor shortage by a program starting in 1942. An activist of this ethnicity adopted a black eagle as a symbol and the phrase "sí, se puede" as a motto for the UFW, which he founded with Dolores Huerta. For 10 points, name this ethnicity of Cesar Chavez and members of the Chicano movement.

ANSWER: <u>Mexican</u>-Americans [accept <u>Chicano</u> or <u>Chicana</u> until "Chicano" is read; prompt on <u>Latinos</u>, <u>Latinas</u>, <u>Latinx</u>, <u>Hispanics</u>, or equivalents]

<JB American History>

6. A character created by this author is angered when his wife cannot remember the words a coconut sweet seller was singing when they first pledged their love. Unusual features of a novel by this author include a "Dialogue Between Adam and Eve" composed only of ellipses and a chapter reading "But, I'm either mistaken or I've just written a useless chapter." In that novel, the protagonist wants to invent an "antimelancholy poultice" and is taught the philosophy of humanitism by a former classmate while having an affair with (\*) Virgilia. After his friend Escobar drowns, one of this author's protagonists obsesses over his son's resemblance to the dead man. This author's character Quincas Borba appears in a novel narrated from the grave by a "small winner." For 10 points, name this Brazilian author of *The Posthumous Memoirs of Bras Cubas* and *Dom Casmurro*.

ANSWER: Joaquim Maria <u>Machado</u> de Assis ("muh-SHAH-doo jee uh-SEES") <JB Other Literature>

7. In this film, two men put a hood over a man sitting in a movie theater and hang him. Early in this film, the camera pans over people in a sun-drenched park while "Ride of the Valkyries" play. At a press conference near the end of this film, extreme closeups show reporters yelling questions like "Are you scared of the atomic bomb?" and "Do you believe in god?" In this film's final scene, five circus performers march in a line playing instruments as a (\*) model launch site is turned into a circus. In this film's opening dream scene, the protagonist floats away from a traffic jam, while a later scene depicts a daydream in which he whips the film's female characters in a harem. For 10 points, name this film about director Guido Anselmi, which is titled for the number of the films that its director, Federico Fellini, said he had made at the time.

ANSWER:  $8\frac{1}{2}$  [accept  $\underline{Otto\ e\ mezzo}$ ]

<JH Other Arts (Film)>

8. These substances can be synthesized by adding oleum to the product of the Ziegler Alfol process. *Pseudomonas aeruginosa* secretes these substances to facilitate swarming motility. CTAB and BAC are examples of these substances with prominent bactericidal properties. One of these substances whose function is to increase compliance is composed primarily of DPPC. Anionic examples of these compounds include sodium (\*) stearate and sodium dodecyl sulfate. Phospholipids are examples of these compounds, which form spherical structures in aqueous solution called micelles that consist of a hydrophobic core and hydrophilic exterior. For 10 points, name these compounds that reduce surface tension.

ANSWER: <u>surfactant</u>s [prompt on <u>phospholipid</u>s until read; prompt on <u>detergents</u>; prompt on <u>emulsifiers</u>] <SR Chemistry>

9. To prepare a ritual offering to this substance, milk, pomegranate leaves, and the twigs of the *haoma* plant are pounded together in a mortar. That ritual offering, *parahaoma*, is a libation to Aban, the divinity of this substance, during the Ab-Zohr, the culminating act of the *yasna*. During the Asperges, a type of this substance is distributed to congregations using a mace-like rod. When this substance is replaced with (\*) sand or another form of earth, a ritual that involves this substance is known as *tayammum*. That ritual using this substance, which has major and minor forms called *ghusl* and  $wud\bar{u}$  respectively, must be completed by Muslims before they can perform  $\bar{s}al\bar{a}t$ , or prayer. For 10 points, converts to Christianity are immersed in what substance during baptism?

ANSWER: <u>water</u> [accept <u>Aban</u> before it is read] <WC Religion>

10. In one novel, some characters who engage in this activity, including a boy nicknamed "Nickname," are fed "Jewish Wheaties" by a teenage nuclear physicist. In that novel about this activity, "Word" Smith tells of the killing of Roland Agni after he discovers the secret of Gil Gamesh. Henry Skrimshander loses his passion for this activity after accidentally injuring Owen Donne in a 2011 novel by Chad Harbach. In Don (\*) DeLillo's Underworld, an object used in this activity is bought from Cotter Martin's father. Philip Roth's The Great American Novel is about this activity, which the protagonist of one novel quits after being shot with a silver bullet by Harriet Bird. Holden Caulfield's brother Allie writes poems in green ink on an object used in this sport. For 10 points, Roy Hobbs, the protagonist of The Natural, plays what sport using "Wonderboy," his bat?

ANSWER: <u>baseball</u> [prompt on <u>sports</u> until read; anti-prompt on answers like <u>fielding</u>, <u>catching</u>, <u>batting</u>, or <u>pitching</u>]

<AP American Literature>

11. A king in this country came into the possession of twelve idols called *sampy* and started a royal bath ceremony, for which zebu cattle were slaughtered. To be found innocent in a trial by ordeal once practiced in this country, one had to throw up three pieces of chicken skin after being fed a poisonous nut. In his namesake charter, Joseph-François Lambert was granted control over this country's natural resources by (\*) Radama II, a king from this country's former Merina monarchy. Another monarch of this country ordered several Christians to be hurled off cliffs as part of her persecution of Christianity; that queen was Ranavalona I. For 10 points, name this African island country where independence from France was achieved by the Malagasy.

ANSWER: <u>Madagascar</u> <WC World History>

12. This composer's five-tone row E E-flat C C-sharp D is transformed antiphonally by trombone and string quartets in the two Dirge-Canons flanking a Thomas poem. A symphony by this composer opens with a harsh spaced E minor chord, doubling G, and a block of gyrating double-reed 16th notes, before the chorus chants "Exaudi" on E and F. The princess just dances in his Faustian parable for narrator, percussionist, and three pairs of instruments, (\*) The Soldier's Tale. Robert Craft premiered his Requiem Canticles and Agon, late works in the twelve-tone technique. He used Rimsky-Korsakov's khorovod and octatonic scale for an "Infernal Dance." This composer arranged Suite italienne out of a ballet based on music believed to be by Pergolesi. He wrote Pulcinella in his neoclassical period and Firebird in his Russian period. For 10 points, name this composer of The Rite of Spring. ANSWER: Igor Stravinsky

<OL Music>

13. Parameters of these objects can be used to calculate the Coddington shape and position factors, which can be used to compute the required conditions for their "bestform" types. A parameter characterizing these objects can be measured using a nodal slide. The action of these objects can be mimicked by a small pinhole or a zone plate. When taking the paraxial approximation, the (\*) power of these objects, measured in diopters, can be computed in terms of their inner and outer radii of curvature by a formula named for a "maker" of them. When these objects are sufficiently thin, the harmonic mean of the image and object distances equals their focal length. For 10 points, name these objects that use refraction to focus light to a single point.

ANSWER: <u>lens</u>es <SY Physics>

- 14. John Mackie defined this phenomenon via "INUS conditions." Gareth Evans used the example of Marco Polo mistakenly thinking "Madagascar" referred to the island to criticize a theory of names based on this phenomenon. The "fake barns" example confounds a theory of knowledge based on this phenomenon put forth by Alvin Goldman. David Lewis attempted to explain this phenomenon in terms of (\*) counterfactuals. The mind associates ideas via contiguity, resemblance, and this phenomenon according to David Hume. Hume also claimed that our notions of this concept merely come from "constant conjunction" by using the example of billiard balls. The material, formal, efficient, and final types of this phenomenon are described in Aristotle's *Metaphysics*. For 10 points, name this phenomenon by which one event is responsible for another event occurring. ANSWER: causation [or causality; or causes; or cause and effect]
- 15. In the first scene of this play, two characters discuss the newborn baby of Lady Mary Splatt. In his first appearance, a character in this play tears a newspaper into five equal strips and whistles "The Mountains of Morne" while talking to the protagonist. In this play's last act, a character asks whether a large car parked outside has a wheelbarrow in it and announces that she is going shopping for cornflakes. A woman in this play gives the protagonist a (\*) toy drum, which is later broken, along with the protagonist's glasses, in a game of blind man's bluff. At the end of this play, that woman, Meg Bowles, says that she "was the belle of the ball" after her two guests, Goldberg and McCann, take the protagonist away. For 10 points, name this play about the title celebration for Stanley by Harold Pinter.

ANSWER: *The Birthday Party* <JH British Literature>

16. This man's mother Marjorie was allegedly so taken with the knight who told her of her first husband's death that she held him in her castle until he married her. After an early defeat of this man, his ally Countess Isabel was imprisoned in a hanging cage and three of his brothers were hanged, drawn, and quartered. One of this man's supporters adopted "I'll make sure!" as his family motto after shouting it while running into a church in Dumfries to finish off "Red" (\*) John Comyn. This man became king ten years after the abdication of his predecessor, John Balliol. This king used pit traps to defeat Edward II's troops near Stirling Castle at the Battle of Bannockburn. For 10 points, name this king who fought with William Wallace for Scottish independence.

ANSWER: Robert the <u>Bruce</u> [prompt on <u>Robert</u>] <JB European History>

17. It's not the Sphinx, but the Naxians of Delos built a terrace of marble statues of this animal dedicated to Apollo. The Speos Artemidos temples were built for a goddess of this form whose names means "she who tears," Pakhet. Two of these animals look away from each other in a symbol of the earth deity Aker. Ptah's wives and his son, the war god Maahes, were depicted with the head of this animal. The "destructive (\*) eye of Ra" took the form of this animal when she ran amok on the Earth, but was pacified after she mistook pomegranate alcohol for blood. This was the animal form of Hathor's violent counterpart, Sekhmet. For his first labor, Heracles strangled one of these animals. For 10 points, name these animals, one of which with impenetrable fur lived in Nemea.

ANSWER: <u>lion</u>s [or <u>lioness</u>es; prompt on <u>cat</u>s] <AP Mythology>

18. Miriam Schapiro used a portmanteau of this medium and "female" to describe her pieces honoring the invisible "women's work" of civilization. A dove perches on a doorway in the middle of a chaotic street scene in a work in this form, which was created by an artist who used it for the *Prevalence of Ritual* series and *The Calabash*, Romare Bearden. Works in this medium, such as the room-sized *Swimming Pool*, a book titled (\*) *Jazz*, and the *Blue Nude II* series were created by an elderly Henri Matisse. A body builder holding a tootsie pop stands in the foreground of a work in this medium, Richard Hamilton's *Just what is it that makes today's homes so different, so appealing?* Dada artists such as Hannah Hoch pioneered a type of this medium called photomontage. For 10 points, name this medium in which various materials and fragments are glued to the canvas. ANSWER: collage [or photomontage until read; or cut-outs; prompt on assemblage] < JB Painting>

19. It's not the ear or kidney, but the transport proteins pendrin and NIS are located in this organ. Uncommon cancers of this organ include Hürthle cell carcinoma and a "medullary" carcinoma. A peroxidase named for this organ creates modified tyrosine residues and can be inhibited by propyl-thio-uracil or methimazole. People with low function of this organ are treated with (\*) Synthroid. One autoimmune disorder of this organ often presents with inflamed and bulging eyeballs. Patients with Down syndrome often overproduce TSH to compensate for this gland's underproduction of T3 and T4. Enlargement of this gland due to an iodine deficiency is called goiter. For 10 points, name this endocrine gland in the neck.

ANSWER: **thyroid** gland (The autoimmune disorder is Graves' disease.) <SY Biology>

20. Hans-Joachim Eckert found Michael Garcia's report on this organization "not admissible." South African businessman "Tokyo" Sexwale ("sex-WAH-lay") withdrew from his campaign to lead this organization by telling the other candidates "It's your problem now." During a video critique of the US government, a former vice president of this organization backed up a claim by citing an (\*) *Onion* article. In July 2015, English comedian Simon Brodkin showered a leader of this organization in fake dollar bills during a press conference. Two months later, Prince Ali of Jordan was defeated by Michel Platini in the race to replace that man, Sepp Blatter. This organization has ignored deaths of immigrant workers building Qatari stadia. For 10 points, name this governing body of international soccer.

ANSWER: FIFA [or Fédération Internationale de Football Association; or International Federation of Association Football; do not accept "UEFA," "CONMEBOL," "CONCACAF," "CAF," "AFC," or "OFC"] (The former vice president is Jack Warner.)

<AP Other (Current Events)>

## **Bonuses**

- 1. Sofonisba Anguissola painted a self-portrait in which she holds a gigantic one of these things featuring the initials of her sisters. For 10 points each:
- [10] Name this art form pioneered by the painter Pisanello, who created a work in this form depicting Byzantine Emperor John VIII.

ANSWER: medals [or medallions]

[10] Pisanello's depiction of John VIII may have inspired the appearance of the seated man on the left side of *The Flagellation*, a painting by this artist who also depicted Christ carrying a white flag in his *The Resurrection*.

ANSWER: Piero della Francesca

[10] Nude males known as the *ignudi* use sashes to hold giant medallions in Michelangelo's fresco on the ceiling of this building, which includes his painting *The Creation of Adam*.

ANSWER: the Sistine Chapel

<JB Painting>

- 2. The simplest molecule with this property is 1,3-butadiene. For 10 points each:
- [10] Identify this property where pi electrons are delocalized across p orbitals in compounds with alternating single and double bonds.

ANSWER: **conjugation** [accept **conjugated**, do not accept or prompt on "hyperconjugation"]

[10] This class of compounds refers to completely conjugated monocyclic hydrocarbons. Their names are prefixed with the number of carbon atoms written in brackets; for example, cyclo-octa-tetra-ene is called [8]-*this*.

ANSWER: annulenes

[10] The second simplest annulene is this molecule, with formula C6H6. Adding a methyl group to this molecule gives toluene.

ANSWER: <u>benzene</u> <SR Chemistry>

- 3. In this play, God abandons heaven after the Great San Francisco Earthquake. For 10 points each:
- [10] Name this play in which Louis Ironson leaves his AIDS-infected partner Prior Walter and begins a relationship with the Mormon Joe Pitt.

ANSWER: Angels in America: A Gay Fantasia on National Themes

[10] This author of A Bright Room Called Day wrote Angels in America.

ANSWER: Tony **Kushner** [or Anthony Robert **Kushner**]

[10] In *Angels in America*, Harper Pitt hallucinates visits to this place with her imaginary travel agent, Mr. Lies. In Michael Chabon's ("SHAY-bon's") *Amazing Adventures of Kavalier and Clay*, Joe is only survivor of a carbon monoxide leak at a naval base in this place.

ANSWER: <u>Antarctica</u> <ES Other Literature>

- 4. Secretary of the Treasury Levi Woodbury developed the idea behind this order, and Thomas Benton tried to push through an act in Congress that advocated a similar goal. For 10 points each:
- [10] Name this executive order that required anyone who purchased government land to pay in gold or silver. It was one of the factors that led to the Panic of 1837, since it heightened the devaluation of paper money.

## ANSWER: Specie Circular

[10] The Specie Circular was issued by this seventh US president, who slew the many-headed demon of the Second Bank of the US in a famous political cartoon.

ANSWER: Andrew Jackson

[10] This faction, which broke off from the Tammany Hall Democrats in 1835, championed the Specie Circular. This faction grew out of the Workingmen's parties and achieved its goals with the passage of the Independent Treasury Act.

ANSWER: <u>Locofoco</u>s <AP American History>

- 5. In a skit called "Shamilton," this person said "My left-wing cred is Biblical; you get one guess who's the most liberal" and then ended by saying that he was running on "Cautious Politician time." For 10 points each:
- [10] Name this politician who is the first Democratic mayor of his city since David Dinkins. He has had a much-publicized feud with the governor of his state, Andrew Cuomo.

ANSWER: Bill **De Blasio** [or Warren Wilhelm, Jr.]

[10] De Blasio was rapping at Inner Circle, a charity event in this city, of which De Blasio is mayor. Mayors of this city have included Rudy Giuliani and Michael Bloomberg.

ANSWER: New York City [or NYC]

[10] In 2013, De Blasio came in first in the Democratic primary for mayor of New York, ahead of Bill Thompson and this politician, the first female and first openly gay person to be Speaker of the NYC Council.

ANSWER: Christine Callaghan Quinn

<AP Other (Current Events)>

- 6. Answer the following about secondary structures of nucleic acids, for 10 points each.
- [10] The hammerhead motif is found in these molecules, strands of RNA that can catalyze biochemical reactions. The fact that some of them can catalyze their own synthesis is the basis of the RNA world hypothesis.

ANSWER: ribozymes

[10] The primary interactions that stabilize nucleic acid secondary structures are hydrogen bonds and these attractive interactions that form between aromatic rings.

ANSWER: pi-pi stacking interactions

[10] The primary secondary structure formed by DNA is this arrangement, which is left-handed in the Z-form and right-handed in the A-form and B-form. Watson and Crick won a Nobel Prize for using the experimental data gathered by Rosalind Franklin to elucidate this structure.

ANSWER: double helix [do not accept or prompt on "helix"]

<SR Biology>

- 7. In one of this novel's vignette-like chapters, the protagonist holds some severed fingers in his mouth after another student loses them in a duel. For 10 points each:
- [10] Name this Penelope Fitzgerald novel about Fritz von Hardenburg's love for Sophie, a dull 12-year-old. It is titled for the object sought by Heinrich von Ofterdingen in a novel Hardenburg wrote under the name Novalis.

ANSWER: The Blue Flower

[10] Shortly after Fritz marries Sophie in *The Blue Flower*, she dies of this oft-romanticized lung disease. In Victor Hugo's *Les Misérables*, Fantine dies of this disease.

ANSWER: <u>tuberculosis</u> [or <u>TB</u>: or <u>consumption</u>]

[10] A character of this occupation tells Fritz that, despite every entity having a question that it asks incessantly, he could not hear Sophie's question. Charles Strickland moves to Paris to take up this occupation in Somerset Maugham's *The Moon and Sixpence*.

ANSWER: **painter**s [or **paint**ing; prompt on <u>artists</u>]

<JB British Literature>

- 8. Massacres conducted by the UPA prompted an operation of this name, in which over a hundred thousand Ukrainians were forcibly resettled into the Recovered Territories. For 10 points each:
- [10] Name this river, the so-called "Miracle" of which was the unexpected repulsion of Mikhail Tukhachevsky's forces from a capital city.

ANSWER: the **Vistula** River [or **Wisła**]

[10] Victims of Operation Vistula were relocated to the Recovered Territories gained by Poland after World War II, one of which was this "free city" on a namesake corridor, whose post office was the site of a siege during the 1939 Nazi invasion.

ANSWER: Gdańsk [or Danzig]

[10] The Lemkos, one of the ethnic groups targeted by Operation Vistula, had earlier been confined in the Talerhof internment camp during this war, which was officially ended by the Treaty of Versailles.

ANSWER: World War I [or the Great War]

<JB European History>

- 9. A sculpture by Marisol Escobar depicts herself looking at this scene, which Renée Cox created a "Yo Mama's" version of. For 10 points each:
- [10] Name this event, the setting of which names a Chris Ofili installation featuring paintings of Rhesus monkeys and pieces of elephant dung.

ANSWER: the  $\underline{\textbf{Last Supper}}$  [prompt on  $\textit{The }\underline{\textit{Upper Room}}$ ]

[10] The Tate's purchase of Chris Ofili's *The Upper Room* in 2005 sparked protests by opponents of this movement that Ofili belongs to. Tracey Emin and Damien Hirst are members of this group.

ANSWER: Young British Artists [or YBA; or Brit artists]

[10] Ofili had earlier used elephant dung for a painting of this person in a blue robe. This biblical woman cradles her dead son in Michelangelo's *Pietà* sculpture.

ANSWER: the Holy **Virgin Mary** [or **Madonna**; or the **Virgin**; prompt on Mary]

<JB Other Arts (Visual)>

- 10. According to Homer, these two beings lived in a "couch" in the land of the Arimoi. For 10 points each:
- [10] Name these two beings, the "parents of all monsters," whose children include the dragon Ladon, the Chimera, and the Gorgon sisters.

## ANSWER: **Typhon** AND **Echidna**

[10] Echidna was killed in her sleep by Hera's servant Argus, who was given the epithet "Panoptes" since he had hundreds of these body parts all over himself.

ANSWER: eyes

[10] Typhon and Echidna also spawned this pet of an old woman named Phaia, a monstrous pig that Theseus slew on his way to Athens.

ANSWER: Crommyonian sow

<AP Mythology>

- 11. Answer the following things related to knot theory, for 10 points each.
- [10] A knot is defined as the embedding of one of these objects in Euclidean space. The inradius of a triangle defines an inscribed one of these objects, which are the locus of all points in two-dimensional space equidistant from a given point.

ANSWER: circles

[10] A knot with this property, such as the trefoil knot, can be continuously deformed onto itself, but with the orientation reversed. A matrix that lacks this property is said to be singular.

ANSWER: invertible [accept descriptive answers indicating there is an inverse]

[10] The Fary–Milnor theorem gives a condition connecting this quantity for a curve in Euclidean space to whether or not the curve is an unknot. Another theorem links the area and line integrals of two forms of this quantity for a surface to the Euler characteristic of the surface.

ANSWER: <u>curvature</u> [accept <u>absolute curvature</u> or <u>Gaussian curvature</u>] (That is the Gauss–Bonnet theorem.) <SR Other Science (Math)>

- 12. The Old Man of Restolo discourages this man from departure on a journey in which he encounters Adamastor, a "rude son of the Earth" with "heavy jowls and an unkempt beard." For 10 points each:
- [10] Name this "eloquent captain" who is held prisoner by the Catual, is informed of danger by the messenger Monsayeed, and romances Tethys on the Isle of Love.

ANSWER: Vasco da Gama [or Vasco da Gama]

[10] Vasco da Gama's adventures are chronicled in this Portuguese national epic by Luís Vaz de Camões ("ka-MOISH").

ANSWER: The <u>Lusiads</u> [or <u>Os Lusídias</u>]

[10] Like other epic poems such as *The Iliad* and *The Aeneid*, *The Lusiads* utilizes this style of narration, in which the work begins in the midst of the plot, even after some important events have taken place.

ANSWER: <u>in medias res</u> [prompt on translations such as <u>into the middle things</u>]

<AP European Literature>

- 13. In *The Speculum of the Other Woman*, Luce Irigaray argued that a discipline founded by this man treats femininity as a "dark continent." For 10 points each:
- [10] Name this Austrian thinker. Julia Kristeva argued that the "semiotic" is the dominant mode of being for infants before the Oedipus complex theorized by this man develops.

ANSWER: Sigmund Freud

[10] The metaphor of woman as a "dark continent" was referenced in this Hélène Cixous ("ay-LEN seek-SOO") essay that uses the title mythical figure as a metaphor for how women's writing can disrupt phallocentrism.

ANSWER: "The Laugh of the Medusa" [or "Le Rire de la Méduse"]

[10] This other feminist philosopher criticized Freud's narrative of gender formation in a book that argues gender is performativity, *Gender Trouble*.

ANSWER: Judith Butler

<JB Philosophy>

- 14. Answer the following about the uses of wagons in medieval European warfare, for 10 points each.
- [10] The Hussites, followers of Jan Hus from this region, developed the Wagenberg tactic of chaining wagons into defensive forts. The territory of this defunct kingdom now forms much of the Czech Republic.

ANSWER: Bohemia

[10] The carroccio, an oxen-drawn war wagon topped with a sacred altar, was used at this 1176 battle, which prompted its loser to sign the Treaty of Venice.

ANSWER: Battle of Legnano ("len-YAH-no")

[10] While carrying barrels of supplies to this city, a convoy led by John Fastolf created a wagon circle in order to win the Battle of the Herrings. Joan of Arc gained fame for turning back the English siege of this city.

ANSWER: <u>Orléans</u> <JB European History>

- 15. These equations can be used to derive the relativistic generalization of the Larmor formula. For 10 points each:
- [10] Name these formulas that give the scalar and vector potentials created by a relativistic point charge given the charge's position, velocity, and the retarded time.

ANSWER: Liénard-Wiechert ("lyay-NARR VEE-cut") potentials

[10] The Liénard–Wiechert potentials are set in the Lorenz gauge, which sets zero equal to *this operation* applied to the vector potential plus one over the speed of light times the time derivative of the scalar potential. This operation is applied to the electric field in the differential form of Gauss's law.

ANSWER: divergence [accept del dot; do not accept or prompt on "del" or "gradient"]

[10] The Liénard–Wiechert potentials can be derived from this set of four differential equations that govern classical electromagnetism.

ANSWER: Maxwell's equations

<SR Physics>

- 16. Clara Schumann convinced Brahms to recast a piece for two pianos into one for this ensemble in F minor, which opens with a unison theme that accentuates the half-step from D-flat to C. For 10 points each:
- [10] Name this ensemble whose chief example Robert Schumann wrote in his "Chamber Music Year" 1842 for keyboard plus string quartet. Schubert's work for this ensemble named "Trout" quotes his song "Die Forelle." ANSWER: piano **quintet** [do not accept "string quintet"]
- [10] Saint-Saëns stormed off the stage after premiering this Belgian composer's sensual piano quintet as they both liked Irish composer Augusta Holmès. He used cyclic form in his organ music, violin sonata for Ysaÿe ("ee-ZAI"), and three-movement Symphony in D minor.

ANSWER: César Franck

[10] A slow fugue begins the Franck-inspired Opus 1 piano quintet of this Spanish composer from Seville. His pact with Albéniz and Falla to reject French idioms led to the *Danzas fantásticas*, *Homenaje a Tárrega* for guitar, and *Fandanguillo*.

ANSWER: Joaquín Turina

<OL Music>

- 17. Alan Bryman described this company's namesake "-ization" as the way its practices of theming and merchandising are coming to dominate society. For 10 points each:
- [10] Name this company whose amusement parks are discussed in Umberto Eco's "Travels in Hyperreality" and Jean Baudrillard's *Simulacra and Simulation*.

**ANSWER: Disney** 

[10] The term "Disneyization" was inspired by this sociologist's description of "McDonaldization," a process in which society adopts the fast food industry's dehumanizing emphasis on efficiency.

ANSWER: George Ritzer

[10] Disneyization requires that workers engage in the labor of managing these phenomena, a process first described by Arlie Hochschild. An experiment involving a fake drug called Suproxin supported the "two-factor theory" of these phenomena.

ANSWER: <u>emotion</u>s <JB Social Science>

- 18. A poem in this poet's best known collection describes his father as feeling "as bad as Whitman in his tower" before shooting himself. For 10 points each:
- [10] Name this Confessional American poet who, before killing himself in 1971, wrote about his alter-ego Henry in his collection *The Dream Songs*.

ANSWER: John Berryman

[10] One of the Dream Songs is an elegy for this "lovely man," who "delivered infinite babies, in one great birth." This pediatrician wrote about a doctor forcing a sick child to open her mouth in the weirdly sexual short story "The Use of Force."

ANSWER: William Carlos Williams

[10] In controversial Dream Songs such as "I'm scared a lonely," Henry adopts the dialect used by performers of this type. White actors often donned this makeup to portray slaves in adaptations of *Uncle Tom's Cabin*.

ANSWER: **blackface** [or **minstrel**s]

<JB American Literature>

- 19. This person is legendarily credited with leaving behind the exercise manuals known as the *Yijīn Jīng* and the *Xīsuĭ Jīng* ("SHEE-sway jing") after teaching martial arts to the monks at the Shàolín Temple. For 10 points each: [10] Name this monk, described as a "blue-eyed barbarian," traditionally held to be the founder of Zen Buddhism.
- ANSWER: Bodhidharma [or Daruma or Pútídámó]
- [10] According to legend, Bodhidharma once spent nine years in a cave performing this action. One version states that when he fell asleep, he cut off a certain part of his body, which fell to the ground and became a tea plant.
- ANSWER: <u>staring at a wall</u> [or equivalents such as <u>gazing at a wall</u> or <u>looking at a wall</u>; prompt on <u>meditation</u> or equivalents by asking "What was Bodhidharma doing while he was meditating?"]
- [10] One of these works describes how Bodhidharma answered, "I don't know," when Emperor Wǔ of Liáng asked him, "Who is facing me?" Zen Buddhists often contemplate these paradoxical works as an aid to meditation.

ANSWER: **koan**s <WC Religion>

- 20. This monarch ordered the execution of Sarmad Karshai, a Sufi poet from Iran who befriended this monarch's brother Dara Shikoh and was accused of omitting "but God" from the *kalima*. For 10 points each:
- [10] Name this monarch, a conservative ruler of the Mughal Empire who ordered the execution of Guru Tegh Bahadur, the reinstatement of the *jizya* tax, and the destruction of many Hindu temples during his reign.

ANSWER: Aurangzeb Alamgir [accept either underlined part]

[10] The jizya tax had previously been abolished by this great Mughal emperor and grandson of Babur, whose court included the talented Nine Jewels.

ANSWER: Akbar the Great

[10] In contrast to Aurangzeb's intolerant religious policy, Akbar constructed this building in Fatehpur Sikri where debates were held between leaders of different religions.

ANSWER: <u>Ibadat Khana</u> [or <u>House of Worship</u>; or <u>House of Prayer</u>] <WC World History>