2016 Terrapin XXIX: Lead Can't Penetrate Steele
Packet 15
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. A version of this object created by David Hammons is located outside of the Studio Museum of Harlem. A dream inspired another artist to create a version of this object which is completely white except for smudged charcoal lines. A mass of these objects makes up the upper right of the painting *Avenue in the Rain*. One artist used the phrase "things the mind already knows" to explain his depictions of this object, as well as of maps and (*) targets. That artist painted this object on three increasingly small canvases which he stacked on each other. Encaustic paint over newspapers was used to create several paintings of this object by Jasper Johns. For 10 points, identify this banner, an anachronistic version of which is held aloft in Emanuel Leutze's *Washington Crossing the Delaware*.
ANSWER: **American flag**s [or **flag**s of the **U**nited **S**tates; prompt on flags or equivalents] (*Avenue in the Rain* is by Childe Hassam.)
<JB Painting>

2. A militia nicknamed after a foodstuff of this color was founded by "Dimas," whose real name was Pedro Joaquín González; that militia, MILPAS, was composed of ex-Sandinistas. The largest part of the Qing military was a Han Chinese army named after a standard of this color, which was separate from the banner system. During the Tambov Rebellion, Alexander Antonov led an army named after this non-white color to resist the policies of war communism. During the Russian Civil War, armed (*) peasant groups were referred to as armies named after this color. "[This color] on blue" is the designation given to attacks on NATO troops by Afghan policemen and soldiers. For 10 points, name the color of the headgear worn by the US Army Special Forces.
ANSWER: **green**
<WC World History>

3. A necessary condition for this process to occur is described in the Bateson–Dobzhansky–Muller model. Richard Goldschmidt described how this process can occur in a "saltatory" fashion via the creation of a "hopeful monster." This process can occur due to vicariance or jump dispersal events. In plants, this process often occurs due to changes in (*) ploidy. This process occurs in bursts according to the theory of punctuated equilibrium. Absence of gene flow and geographical isolation are the primary causes of the "sympatric" and "allopatric" types of this process. For 10 points, name this evolutionary process in which two reproductively isolated populations diverge taxonomically.
ANSWER: **speciation** [accept equivalents such as **creating** new **species**; accept **cladogenesis**; accept **anagenesis**; prompt on evolution; prompt on genetic incompatibility; prompt on reproductive isolation; prompt on geographic isolation]
<SR Biology>

4. **Marshallese has 24 of these sounds because back and round became secondary articulations on adjacent sounds, leaving a vertical system of height and ATR. On a spectrogram, these sounds show a gradual slope in F1 or F2. Breaking produces these sounds. Chomsky and Halle postulate in *SPE* that these underlyingly tense sounds are transformed synchronically by 3-way shift and glide insertion rules. Canadian raising affects these sounds before voiceless obstruents. Like geminates, these sounds take two timing slots; unlike (*)** hiatus, which requires two syllables, they have a branching nucleus. Non-rhotic British dialects have centering ones. These sounds are drawn as arrows on a trapezoid diagram. General American has five rising, closing ones; four of those developed from Middle English long vowels in the Great Vowel Shift. For 10 points, give the term for a complex vowel in one syllable that transitions between two vowels.
ANSWER: **diphthong**s [prompt on vowels or long vowels until "hiatus" is read]
<OL Social Science>

5. **This poet asks "When will return the glory of your prime?" in a poem that begins by addressing "O World! O Life! O Time!" This poet describes "The everlasting universe of things / Flows through the mind, and rolls its rapid waves" in a poem that says "Thou hast a voice, great Mountain." This poet of "A Lament" compares the addressee of one poem to "the bright hair uplifted from the head / Of some fierce (*)** Maenad" and tells the subject to "Drive my dead thoughts over the universe." This poet describes "Two vast and trunkless legs of stone / Stand in the desert" in a poem whose speaker reads an inscription that commands "Look on my works, ye Mighty, and despair!" For 10 points, name this poet of "Mount Blanc," "Ode to the West Wind," and "Ozymandias."
ANSWER: Percy Bysshe **Shelley**
<ES British Literature>

6. **The atheist Diagoras was said to have pointed out that people who died in events of this sort did not leave offerings in temples. Nauplius got revenge on Agamemnon by causing many of these events near Euboea. After surviving one of these events, Ajax the Lesser died when a god split a rock he was resting on. Zeus killed a man on the way to the Oracle of Delphi in one of these events because he had called his wife "Hera"; after the death of that man, (*)** Ceyx, his wife Alcyone killed herself and became a kingfisher. All but one of a certain group are killed in this sort of event after they ignore Tiresias's warnings and eat the cattle of Helios. After becoming the only survivor of one of these events, Odyssey arrives at Ogygia, Calypso's island. For 10 points, the Sirens caused what sorts of accidents by luring boats to their rocky island?
ANSWER: ship**wreck**s [or equivalents of **storm**s at **sea**; prompt on voyages or journeys by ship; prompt on storms or similar answers with "where?"]
<JB Mythology>

7. **While serving as Interior Minister, this leader created a police force known as the Mobile Brigades alongside Célestin Hennion ("en-YON"). This leader challenged Paul Déroulède to a duel after Déroulède accused this leader of involvement in the Panama scandal. This leader ordered the arrest of his predecessor Joseph Caillaux ("kah-YO") for his antiwar activities. As the head of the newspaper (*)** *L'Aurore*, this leader published an open letter to Félix Faure that condemned the conviction of Alfred Dreyfus; that letter was Émile Zola's "J'accuse." This leader's second term in his highest office saw the appointment of Ferdinand Foch as the supreme commander of the Allied forces. For 10 points, name this prime minister, a "Tiger" who led France through the end of the First World War.
ANSWER: Georges Benjamin **Clemenceau** ("klay-mon-SO")
<WC European History>

8. **One technique named for this adjective was first performed using gadolinium phosphomolybdate tridecahydrate by William Giauque ("jee-OAK"). In that process named for this adjective, a paramagnetic salt in equilibrium with a liquid helium bath is first magnetized, then the helium is removed and the temperature drops to values as low as 1 millikelvin due to this type of (*)** "demagnetization." A steeply-sloped hyperbola on a PV diagram represents this type of process, for which the product of pressure times volume raised to the power of the heat capacity ratio is constant. A process that is reversible and has this property is isentropic. For 10 points, the Carnot cycle pairs two isothermal processes with what type of process that has no heat transfer?
ANSWER: **adiabatic** [accept **adiabatic demagnetization**]
<BB Physics>

9. **A composer from this country wrote pastiches for Segovia, and Heifetz arranged his *Little Star* in F-sharp. Piano and piccolo teeter in unison before fast cinquillos in a work from this non-Cuba country, *Danzón No. 2*. A bass clarinet trill, 7/8 bassoon ostinato, and snaky tuba motif over gong, tom-tom, and claves open a work from here. The coda of a piece depicting it repeats a dragged out 15-beat huapango plus timpani hit rhythm, then alternates 6/8 and 5/8. That piece opens with irregular G major brass thirds and rising strings based on** (*) El Palo Verde. A US immigrant to this country hand-punched Study No. 33, a canon in root 2 for player piano. Composers from here wrote the waltz *Over the Waves* and *Sinfonía India*. Ponce, Márquez, and Revueltas, the composer of *Sensemayá*, are from here. Carlos Chávez premiered Copland's tone poem about a salon in its capital. For 10 points, name this country home to mariachi.
ANSWER: **Mexico**
<OL Music>

10. **In a short story, one of these animals downs a schnapps bottle and then shouts "Hallo!" at a crowd of sailors near his cage. In Saul Bellow's *Herzog*, Lucas Asphalter attempts to revive one of these animals through mouth-to-mouth resuscitation despite the risk of contracting the animal's tuberculosis. After the carriage in which they sit is lit on fire, one of these animals and Yuzuki burn to death in Ryunosuke Akutagawa's "Hell Screen." One of these animals is nicknamed "Red (*)** Peter" after being shot in the face, and issues a titular "Report to an Academy." In Jhumpa Lahiri's "The Interpreter of Maladies," Mrs. Das's son Bobby is attacked by a group of these animals. In a W. W. Jacobs short story, Mr. White uses this animal's paw to revive his son. For 10 points, name these animals that Sun Wukong rules over.
ANSWER: **monkey**s [or **ape**s]
<AP Other Literature>

11. **These organizations gained control of one city via the Ordinances of Justice, and that city was home to one of these groups named for the shady street it was located on, the Calimala. Nineteen of these institutions in Constantinople are the subject of the *Book of the Prefect*. In another city, six of the nine members of the Signoria government were chosen from seven of these institutions known as the *arti maggiore*. Michele di Lando led people who had been** (*) excluded from these institutions in Florence in the Ciompi revolt. During a period known as the *wanderjahr* ("VON-duh-yarr") in Germany, young members of these organizations would travel around as journeymen. The Hanseatic League was a confederation of the "merchant" variety of these institutions. For 10 points, name these associations of craftsmen common in Medieval Europe.
ANSWER: **guild**s [or **arti** until "arti" is read]
<JB European History>

12. **The article "The Geometry of Innocent Flesh on the Bone" described a technique in which this structure is made to execute bits of code called gadgets; that technique is return-oriented programming. The return-to-libc method circumvents schemes in which this structure is non-executable, although it is usually defeated using Address Space Layout Randomization. Adding random values called canaries to this structure is intended to prevent the overwriting of return pointers on this structure's (*)** frames, which is often the goal of attacks that "smash" this structure. This structure grows downwards, in contrast to another region used for dynamic memory allocation, the heap. When a function exits, its variables are popped off this structure. For 10 points, name this region of computer memory that shares its name with a first-in, last-out data structure.
ANSWER: call **stack** [or the **stack**; accept execution **stack**, control **stack**, function **stack**, or run-time **stack**]
<JB Other Science (Computer Science)>

13. **This poet drew from Kleist's essay "On the Marionette Theater" for a poem in which the speaker declares "I don't want these half-completed masks, rather the Doll." This poet noted "He who has not built his house, will not start now" in a poem beginning "Lord it is time. Great was the summer feast." A poem by this author begins by asking "But who are they, tell me, these Travellers?" before describing the (*)** painting *Family of Saltimbanques*. Stephen Mitchell's translation of a poem by this author of "Autumn Day" imagines "eyes like ripening fruit" and ends "You must change your life." A cycle by this poet contains the line "Every angel is terror" and begins "Who, if I cried out, would hear me among the angelic orders?" For 10 points, name this German poet of "An Archaic Torso of Apollo" and *The Duino Elegies*.
ANSWER: Rainer Maria **Rilke**
<JB European Literature>

14. **A piece about this event opens with amorphous ostinati from a Distant Choir of muted horn, chimes, harp, piano, strings, as *Te Deum* is intoned in unison. Frank Bridge's *Lament* for Catherine, aged 9 was inspired by this event. Workmen reacting to this event whistled a hymn played on barrel organ at a Third Ave El station, according to Charles Ives. "Sweet By and By" emerges from chaos in his piece about this event in Orchestral Set No. 2, *From Hanover Square North*. Jess Sechrist's song "remembering" this event opens "America once more is in (*)** battle array." Two weeks after this event, Charles McCarron and Nat Vincent wrote a song that begins "The nation is sad as can be / A message has come over the sea." Songs after this event reveal neutral America's shift away from pacifism. For 10 points, name this 1915 event in which a German U-boat destroyed a British ocean liner.
ANSWER: sinking of the *RMS **Lusitania*** [accept equivalents; prompt on World War I; do not accept "US entry into World War I"]
<OL Other Arts (Music)>

15. **On the day before this time period begins, certain individuals spend the night at Muzdalifah, after hearing a sermon atop Mount Arafat. During this time period, it is customary to divide up a *qurban* into three parts, one of which is shared with the needy. This time period is considered to be the "greater" of two time periods during which a special prayer with six additional (*)** *takbirs* is said. During this celebration that begins on the tenth day of Dhu al-Hijjah, the *jamarat* become the targets of stone-throwing pilgrims participating in the Stoning of the Devil. This celebration, which marks the end of the *hajj*, is often commemorated by sacrificing an animal. For 10 points, name this Islamic celebration that commemorates the willingness of Ibrahim to sacrifice his son.
ANSWER: **Eid al-Adha** [accept **Eid al-Kabir** or **Greater Eid** until "greater" is read, but prompt afterwards]
<WC Religion>

16. **A politician from this state co-authored the 13th Amendment and tried to combat the Black Codes by introducing the First Civil Rights Act; that politician was Lyman Trumbull. Had the Compromise of 1877 not taken place, David Davis, a politician from this state, may have individually selected the winner of the election. As personal bodyguard to a president from this state, Ward Hill Lamon vehemently denied the existence of a** (*) "Baltimore plot" to assassinate that president. That president from this state discussed the expansion of slavery in his Peoria Speech and his Cooper Union address, and debated the proposer of the Freeport doctrine during during an 1858 senate race. For 10 points, name this state once represented by Stephen Douglas and Abraham Lincoln.
ANSWER: **Illinois**
<AP American History>

17. **Hydrolysis of a Pinner salt generates these compounds, which can also be synthesized by adding 2,4,6-trichlorobenzoyl chloride and DMAP to a carboxylic acid. This functional group is found in the amine protecting group t-BOC. They're not peptides, but DCC can be used as a coupling agent alongside DMAP to form these compounds. Reaction of an alcohol with tosyl chloride forms a** (*) "sulfonate" one of these compounds. Under base catalysis, two of these compounds can react to form one compound containing this functional group beta to a ketone. The most common synthesis of these compounds is done via an acid-catalyzed reflux of an alcohol with a carboxylic acid. For 10 points, the Claisen condensation and Fischer reaction synthesize what compounds named for their fruity smells?
ANSWER: **ester**s (The other reactions referenced are the Yamaguchi and Steglich reactions.)
<TW Chemistry>

18. **A former national airline of this country went bankrupt in the 1990s after its "hunter strategy" of buying stakes in other small airlines backfired. A major industry of this country uses the "60 percent rule" to determine authenticity. In June 2015, Indian supermarkets like Big Bazaar banned Maggi noodles, a product from this country, due to reports that it contained 17 times the permissible amount of lead. The IRS paid 104 million dollars to whistleblower Bradley** (*) Birkenfeld after he revealed American tax evasions with the aid of a bank from this nation, UBS. Victorinox has added a USB drive and a laser pointer to newer models of a product from this nation whose original version included a nail file, scissors, and a corkscrew. For 10 points, name this European nation known for its namesake watches and knives.
ANSWER: **Switzerland** [or the **Swiss** Confederation; or **Suisse**; accept **Swiss army knife**s or **Swiss watch**es; accept **Swiss**air]
<AP Other (Academic)>

19. **In a novel by an author of this *given* name, the protagonist does not speak to his colleague Lomax for 20 years after savagely interrogating a blowhard student with a crippled arm during his thesis defense. In a novel by an author of this given name, the title character fights with a man who makes him sing about the hardness of walls. An author of this given name represented himself as a Genie in a three-part novel that integrates the stories of Dunyazad, Perseus, and Bellerophon,** (*) *Chimera*. In a novel by an author of this given name, the protagonist decides not to kill Wealthow, listens to "the Shaper" outside the doors of Hart, and dies after his arm is torn off by Beowulf. A novel by an author of this given name features Henry Burlingame, whose student Ebenezer Cook writes the title poem, *The Sot-Weed Factor*. For 10 points, identify the given name of authors Williams, Gardner, and Barth.
ANSWER: **John** [accept **John** Williams, **John** Barth, or **John** Gardner] (The first novel is *Stoner*.)
<AP American Literature>

20. **In a speech before Parliament, this thinker argued that the death penalty was the least cruel mode of punishment and that it acts as an effective deterrent. This thinker observed that the granting of special immunities to citizens and the creation of constitutional checks were the two ways that sovereign power has historically been controlled. This thinker stated that "there remain no legal slaves, save the** (*) mistress of every house," while attacking marriage laws in a work he possibly co-wrote with his wife Harriet Taylor. In another work by this thinker, he posited that actions of individuals should only be limited to prevent harm to others. For 10 points, name this utilitarian who wrote "The Subjugation of Women" and *On Liberty*.
ANSWER: John Stuart **Mill**
<JH Philosophy>

Bonuses

1. In Lithuania, a ban on the Latin alphabet intended to promote this language was circumvented by book smugglers such as Jurgis Bielinis. For 10 points each:
[10] Name this language, the speaking of which in public and schools was enforced in territories such as Poland during the reign of Nicholas I and Alexander II.
ANSWER: **Russian**
[10] The russification of the Ukraine under Alexander II included a secret ukaz decree named for this city. Otto von Bismarck edited a telegram reporting on Wilhelm I's encounter with Count Benedetti in this German spa town.
ANSWER: Bad **Ems**
[10] This territory's governor Nikolai Bobrikov was assassinated by Eugen Schauman for mandating the teaching of Russian in schools, among other things. The February Manifesto strengthened Russian rule of this possession, which it gained by the Treaty of Fredrikshamn.
ANSWER: Grand Duchy of **Finland**
<JB European History>

2. IEEE Standard 754 outlines the binary formats for these numbers, which consist of a sign bit, the exponent, and the fraction. For 10 points each:
[10] Name these numbers, which are used to approximate real numbers on computers. In Java, primitive types exist for 32-bit and 64-bit formats of these numbers; the latter format is represented by the double type.
ANSWER: **float**ing-point numbers [or **float**s]
[10] The binary representation of floating point numbers was the basis for a "fast" algorithm frequently attributed to John Carmack, which estimates the value of this function of x and involves the "magic number" 0x5f3759df.
ANSWER: **inverse square root** of x [or equivalents like **one over the square root** of x, or **one over x to the** power of **one half**, or **x to the** power of **negative one half**; do not accept or prompt on "square root"] (The algorithm was used in the source code of *Quake III Arena*.)
[10] In the fast inverse square root algorithm, after an initial guess is made, the guess is improved using this other algorithm, which finds increasingly better approximations for a function's roots using x-intercepts of tangent lines.
ANSWER: **Newton**'s method [or **Newton–Raphson** method]
<WC Other Science (Computer Science)>

3. Answer the following about novels in which characters attempt to jump to their deaths, but fail. For 10 points each.
[10] Joel Harrison Knox sees the donkey John Brown jump off a balcony and hang itself in this first novel of Truman Capote. In this novel, Joel travels to his father's home at Skully's Landing and befriends Idabel Thompkins.
ANSWER: *Other Voices, Other Rooms*
[10] This Dominican Rutgers student tries to kill himself by jumping off a turnpike bridge, but is saved when he lands in a bush in a highway median. Junot Díaz chronicled this character's "Brief Wondrous Life."
ANSWER: **Oscar** **Wao** [accept either underlined name]
[10] The title character of this Herman Hesse novel clings to a coconut tree while he decides whether to commit suicide by jumping into the river. He decides against it after the syllable "Om" resonates within him.
ANSWER: *Siddhartha*
<AP Other Literature>

4. This man's assassination may have been carried out by Juan Roa Sierra, a convert to Rosicrucianism who believed that he was the reincarnation of Gonzalo Jiménez de Quesada and Francisco de Paula Santander. For 10 points each:

[10] Name this man, who was the leading Liberal presidential candidate in a 1950 election. In the aftermath of this man's assassination, the radio station Últimas Noticias instigated the riots known as the Bogotazo.

ANSWER: Jorge Elicier **Gaitán**

[10] The Bogotazo was the beginning of this ten-year civil war fought between supporters of a South American country's Liberal and Conservative parties.

ANSWER: La **Violencia** [or The **Violence**]

[10] La Violencia took place in this South American country. Communist settlements like Marquetalia, which were later defended by FARC, were formed in this country's countryside during La Violencia.

ANSWER: **Colombia**

<WC World History>

5. Answer the following about land art by people who are not Robert Smithson, for 10 points each.

[10] A Richard Long photograph of a line which he created in a Wiltshire field is partly titled for this activity. It isn't pointing, but Alfredo Giacometti is best known for his sculptures of emaciated figures performing this action.

ANSWER: **walk**ing [or A Line Made by **Walking**; or The **Walking** Man; or L'Homme qui **marche**; or equivalents such as **striding** or **step**ping]

[10] Ana Mendieta, an artist born in this country, created "earth-body works" such as Tree of Life. Alberto Korda took the Heroic Guerilla photograph on this island, where its subject, Che Guevara, had helped lead a revolution.

ANSWER: **Cuba**

[10] Land artist Walter de Maria created a grid of 400 stainless steel poles in New Mexico, which he titled a "field" of this phenomenon.

ANSWER: **lightning**

<JB Other Arts (Visual)>

6. Answer the following about edits Thomas Bowdler made in his efforts to make Shakespeare's plays appropriate for 19th-century families, for 10 points each.

[10] References to Gertrude's "incestuous sheets" and to Ophelia's suicide mysteriously disappeared from Bowdler's edition of this tragedy.

ANSWER: *Hamlet*

[10] Bowdler rewrote this character's line "the bawdy hand of the dial is now upon the prick of noon." This character gives a speech describing Queen Mab's chariot and quips "Ask for me to-morrow, and you shall find me a grave man."

ANSWER: **Mercutio**

[10] Doll Tearsheet, a syphilitic prostitute featured in scenes set in this tavern, was removed from Henry IV, Parts 1 and 2. In those plays, this inn is frequented by Nym, Pistol, Bardolph, Falstaff, and Prince Hal.

ANSWER: **Boar's Head** Inn

<JB British Literature>

7. The Australian SILEX system uses IR and UV lasers to separate the isotopes of the central atom of this compound. For 10 points each:
[10] Name this highly corrosive and volatile compound, which is also used in gaseous centrifugation and gaseous diffusion methods for enrichment. It is useful because of its high vapor pressure at room temperature.
ANSWER: **uranium hexafluoride** [or **UF6**]
[10] Plutonium-239, which is produced from uranium-238, can then be bombarded with two neutrons to form the 241 isotope of this element. Its dioxide is commonly used in ionization chamber smoke detectors.
ANSWER: **americium** [or **Am**]
[10] Uranium, plutonium, and americium all belong to this group of elements, which are located below the lanthanides in the periodic table. They are formed by filling the 5f shell.
ANSWER: **actinide**s
<SR Chemistry>

8. One of the armies at this battle positioned itself in front of the flooded Broad River. For 10 points each:
[10] Name this battle from the southern campaign of the Revolutionary War, in which the American forces under Daniel Morgan decisively defeated their British counterparts under Banastre Tarleton in South Carolina.
ANSWER: Battle of **Cowpens**
[10] *Description acceptable*. During the Battle of Cowpens, Daniel Morgan divided up his infantry into this formation. One component of this formation consisted of militiamen who fired two volleys before feigning retreat.
ANSWER: **three lines** [or equivalents; prompt on partial answers like three parts or multiple lines]
[10] The Battle of Cowpens preceded this final engagement of the Revolutionary War by seven months. At the end of this engagement, Cornwallis surrendered to an army commanded by Washington and the Marquis de Lafayette.
ANSWER: Siege of **Yorktown** [or Battle of **Yorktown**]
<WC American History>

9. One of these structures in Wilmette, Illinois has the "Greatest Name" inscribed on the exact center of its dome. For 10 points each:
[10] Name these nine-sided structures in which seats must face towards a certain shrine in Akko, Israel. These structures may be located next to a Haziratu'l-Quds ("HUH-zee-ruh-tool KOODZ").
ANSWER: **House**s of **Worship** [or **Mashriqu'l-Adhkár**; accept, but DO NOT REVEAL: **Bahá'í temple**s]
[10] Houses of Worship serve as temples of this monotheistic religion founded by Bahá'u'lláh, who wrote its primary scripture, the *Kitáb-i-Aqdas*.
ANSWER: the **Bahá'í** Faith [or **Baháism** or **Bahá'iyyat**]
[10] The seat of this Bahá'í governing institution is in the center of the Arc on Mount Carmel in Haifa, Israel. This institution was established after the finish of Shoghi Effendi's Ten Year Crusade.
ANSWER: **Universal House of Justice** [or **Baytu'l-'Adl**-i-A'ẓam]
<AP Religion>

10. Plink is a software tool used to study association across this thing, which was completely mapped between 1990 and 2003 by a project sponsored by the NIH. For 10 points each:
[10] Name this complete nucleic acid sequence of human chromosomes.
ANSWER: the human **genome**
[10] Plink MAP files are used to list the position of these sources of genetic variations, which are defined as single base-pair variations that occur in at least one percent of the population.
ANSWER: **single nucleotide polymorphism**s [or **SNP**s ("snips")]
[10] SNPs with a minor allele frequency of greater than 5 percent were targeted by this project that followed the Human Genome Project.
ANSWER: International **HapMap** Project
<SY Biology>

11. This artist depicted grain elevators in paintings such *Aucassin and Nicolette* and *My Egypt*. For 10 points each:
[10] Name this American modernist painter best known for a 1928 painting inspired by a William Carlos Williams poem about a fire engine, *I Saw the Figure Five in Gold*.
ANSWER: Charles **Demuth**
[10] Demuth's painting of an ocean liner entitled *Paquebot (Paris)* and Charles Sheeler's similar painting *Upper Deck* both exemplify this American art style, characterized by hard-edged depictions of industrial scenes.
ANSWER: **precision**ism
[10] The modernist fascination with ocean liners also appears in a Futurist document of this type by Filippo Marinetti. The founders of most 20th-century art movements issued a declaration of this type explaining their goals and ideas.
ANSWER: **manifesto**s
<JB Painting>

12. In this novel, Gene Harrogate was sent to a work camp after he "violated" a farmer's watermelons, which led to his nickname of "the Moonlight Melonmounter." For 10 points each:
[10] Name this novel in which Cornelius, the title character, leaves his luxurious life to live in solitude as a catfish-seller in Knoxville along the Tennessee River.
ANSWER: *Suttree*
[10] This author wrote the semi-autobiographical *Suttree*, in addition to a novel featuring psychopath hitman Anton Chigurh, *No Country for Old Men*, and the post-apocalyptic novel *The Road*.
ANSWER: Cormac **McCarthy**
[10] In this other McCarthy novel, John Grady romances Alejandra while working on a ranch after escaping from the people pursuing Jimmy Blevins.
ANSWER: *All the Pretty Horses*
<AP American Literature>

13. Albert of Mecklenburg mocked this monarch as "Queen Breechless," but got stuck in a bog during battle with her forces and was imprisoned in Lindholm. For 10 points each:
[10] Name this daughter of Valdemar IV who selected the 11-year-old Philippa of England as a bride for her heir, Eric of Pomerania.
ANSWER: **Margaret** I of Denmark
[10] Margaret was the founder of this union of the kingdoms of Denmark, Sweden, and Norway, which lasted until Sweden rebelled against Christian II for massacring his enemies in the Stockholm Bloodbath.
ANSWER: Union of **Kalmar** [or Union of **Kalmaris**]
[10] Margaret fought against a gang of these people called the Vitalian Brotherhood. Notable British criminals of this type included Calico Jack, Anne Bonny, and Captain Kidd.
ANSWER: **pirate**s [or **privateer**s; prompt on robbers or similar answers]
<JB European History>

14. After an earthquake annihilated this city in 1963, foreign relief constructions like Mexico Street and Bucharest Polyclinic were named after the countries that built them. For 10 points each:
[10] Name this city whose Stone Bridge is built on the Vardar River. Monuments built during its "2014" antiquisation project include a bronze "Warrior on a Horse" fountain sculpture and an asymmetrical Memorial House to Mother Teresa.
ANSWER: **Skopje** ("SKOP-yeh")
[10] The "Warrior on a Horse" sculpture depicts Alexander the Great, a king of this country's namesake ancient empire. Skopje is its capital.
ANSWER: Republic of **Macedonia** [or Republika **Makedonija**]
[10] Skopje's 2014 renewal project was somewhat sullied in spring 2016 when activists used these devices to protest PM Nikola Gruevski's wiretapping scheme of over 20,000 journalists and politicians. The movement was aptly dubbed the "Colorful Revolution."
ANSWER: **paintball gun**s [or **paintball marker**s]
<AP Other (Current Events)>

15. This novel's title character calls "Nastler," the author of this novel, a "damned conjuror" after Nastler tells him that the Epilogue is "so essential" that he placed it four chapters before the novel's end. For 10 points each:
[10] Name this novel by Alasdair Gray about both the titular "dragonhided" resident of Unthank and Duncan Thaw, an arts student who drowns himself after falling into depression while he paints the ceiling of a Glaswegian church.
ANSWER: *Lanark: A Life in Four Books*
[10] This author sends a stolen letter to Elliot Templeton and discusses Indian philosophy over coffee with Larry Gray, the protagonist of his novel *The Razor's Edge*. He wrote about the club-footed Philip Carey in *Of Human Bondage*.
ANSWER: William Somerset **Maugham** ("MAWM")
[10] Orhan Pamuk himself travels to the titular city of this novel to gather information about Ka, a Turkish poet living in exile in Germany, and his reports on a coup led by Blue.
ANSWER: *Snow* [or *Kar*]
<AP European Literature>

16. The nematic phase of these structures can be deformed by applying an electric field in the Fréedericksz transition. For 10 points each:
[10] Name these substances which can also exist in smectic, chiral, or columnar phases. They have varying degrees of orientational and positional order.
ANSWER: **liquid crystal**s [or **LC**s; prompt on partial answer]
[10] In liquid crystals, this dimensionless unit vector indicates the preferred orientation of molecules in the neighborhood of any point.
ANSWER: **director**
[10] Liquid crystals were first discovered when it was noted that a derivative of this molecule has two melting points. This steroid maintains the fluidity of animal cell membranes, and it is the primary component of high-density lipoprotein particles.
ANSWER: **cholesterol**
<SR Physics>

17. Edward Banfield portrayed residents of a town in this region as uninterested in taking initiative for the public good in his book *The Moral Basis of a Backward Society*. For 10 points each:
[10] Identify this region. The book *Making Democracy Works* claims that this region's underdevelopment and failures of local government are caused by a lack of trust and civic involvement.
ANSWER: **Southern Italy** [or **Mezzogiorno**; prompt on the South]
[10] *Making Democracy Work* was written by this American sociologist whose best-known book uses decreasing membership in sports leagues to trace a decline in "social capital" in the United States.
ANSWER: Robert **Putnam** (The book is *Bowling Alone*.)
[10] Banfield's *The Moral Basis of a Backward Society* coined a term for an "amoral" focus on the interests of this unit. The "nuclear" group of this sort usually includes two married adults.
ANSWER: the **family** [or word forms such as **families** or **familism**]
<JB Social Science>

18. W. K. Clifford argued that it is wrong to believe anything on insufficient evidence with the example of an owner of one of these things who convinces himself of its soundness. For 10 points each:
[10] Identify this type of object. A thought experiment about identity asks whether one belonging to Theseus is the same after its planks, rudder, and sails have all been replaced.
ANSWER: **ship**s [or **boat**s]
[10] Otto Neurath ("NOY-rot"), a member of this group of logical positivist philosophers, famously described scientific knowledge as a ship that must be rebuilt at open sea.
ANSWER: **Vienna Circle**
[10] The Ship of Theseus thought experiment resembles a situation involving a teletransporter imagined in this Derek Parfit book. This book's first section argues that ethical egoism is a "self-defeating theory."
ANSWER: ***Reasons and Persons***
<JB Philosophy>

19. In his final years, Beethoven planned to write an overture on a theme named for this composer. For 10 points each:

[10] Name this Baroque composer who included his "musical cryptogram," made of the notes B-flat A C B-natural, in *The Art of the Fugue*.

ANSWER: Johann Sebastian **Bach**

[10] Britten used the musical cryptogram of this composer in his *Rejoice in the Lamb* and *The Rape of Lucretia*. This composer used the motif D E-flat C B in all five movements of his String Quartet No. 8, dedicated "to the victims of fascism and the war."

ANSWER: Dmitri **Shostakovich**

[10] Britten wrote the theme for a set of cello pieces by 12 composers that Rostropovich gathered for a tribute to this Swiss conductor, which was based on a hexachord. He commissioned Bartók's *Divertimento* and *Music for Strings, Percussion and Celesta*.

ANSWER: Paul **Sacher** ("ZOKH-uh")

<OL Music>

20. In the *Sorla Thattr*, a god attempts to steal this object from its sleeping owner by taking the form of a fly and then a flea. For 10 points each:

[10] Name this object that a woman obtained by sleeping with the four dwarfs who had made it.

ANSWER: **Brisingamen** [or the **Brising**a Necklace; prompt on Freyja's <u>necklace</u>, <u>jewel</u>, <u>collar</u>, etc.]

[10] Brisingamen, the necklace of the Norse goddess Freyja, is mentioned in this Anglo-Saxon epic, whose hero is given a necklace that resembles it by Queen Wealhtheow after he slays Grendel.

ANSWER: ***Beowulf***

[10] In the *Prose Edda*, this god fights Loki in the form of a seal in order to win the Brisingamen back, foreshadowing that he and Loki will kill each other at Ragnarok.

ANSWER: **Heimdall**r

<JH Mythology>