

2016 Terrapin XXIX: Lead Can't Penetrate Steele

Packet 13

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Tossups

1. **A character in this play once had to sit through a coronation ceremony after the Chamber of Commerce named her “Queen of Neewollah.” In a scene of this play in which a sunset lights the stage through a doorway, a girl who hangs Picasso paintings over her bed sketches the portrait of a character who wears cowboy boots. A character in this play tells a newspaper boy to “go blow your nose” after he flirts with her sister, and later throws up after getting drunk on a man’s whisky. That man, (*) Howard, is forced into marrying the schoolteacher Rosemary Sydney in this play. This play ends with Madge Owens running after the train on which Hal Carter escaped from police. For 10 points, name this play that takes place on Labor Day in a midwestern town set around the title event by William Inge.**

ANSWER: Picnic

<JH American Literature>

2. **Cross-sections and decay rates of particle interactions are proportional to this operation applied to the interaction matrix element. For two observables A and B, the generalized uncertainty principle states that the variance of A times the variance of B is greater than or equal to *this operation* applied to one over $2i$ times the expectation value of the commutator of A and B. This operation applied to the scattering amplitude gives the differential cross section. Each of the vector components of the (*) angular momentum operators commute with the operator corresponding to this operation applied to angular momentum. Normalizing a wavefunction is done by setting the integral of this operation applied to the wavefunction equal to one. For 10 points, name this operation that, when applied to the wavefunction, gives the probability density, and which gives negative 1 when applied to i .**

ANSWER: magnitude squared [or absolute value squared; or modulus squared; accept multiplication by the complex conjugate]

<SR Physics>

3. **This monarch’s reign saw the publication and widespread distribution of the agricultural manual called the *Straight Talk on Farming*. This monarch granted the Sō family trading privileges in the Kakitsu Treaty, after the Ōei Invasion, a raid on pirate bases on Tsushima, took place during his reign. It was said that an innovation from this monarch’s reign could be learnt by wise men in a morning and by stupid men in ten days. This monarch patronized the Hall of (*) Worthies, a group of scholars that wrote the manual known as the *Hunmin Jeongeum* (“hoon-meen jung-um”) in order to promulgate a new alphabetic writing system that could be used by commoners in place of Chinese characters. For 10 points, name this great Korean king of Joseon whose reign saw the invention of Hangul.**

ANSWER: Sejong the Great [accept Yi Do or Lee To]

<WC World History>

4. The short prologue of a piece in this genre represents a curse with three descending tritones and fate with a rising D minor triad. The final choral fugue of that piece in this genre begins in D major over a long pedal point before an F-sharp minor stretto. Giacomo Carissimi's *Jephthe* is in this genre. A soft pizzicato note and sudden C major chord from the chorus and orchestra on the word "Licht" follows a C minor overture with unresolved chromatic harmonies depicting Chaos in a piece in this genre. Mendelssohn modeled his (*) *Elijah* on Bach's pieces in this genre after organizing the revival of the latter's *St Matthew Passion*. A Haydn piece in this genre was inspired by *Paradise Lost* and Genesis. This genre of religious dramatic music is intended for concerts, not stage. A piece in this genre repeats "forever and ever" in its final Hallelujah Chorus. For 10 points, name this genre of Haydn's *Creation* and Handel's *Messiah*.

ANSWER: oratorio

<OL Music>

5. A poem written in this state addresses a "venom Elf" whose "whorle pins do not clasp" a wasp for fear "he should fling / His sting." A poet from this state wrote a poem addressed to a "rambling brat" who was "snatched... by friends, less wise than true." Opening lines from poems written in this state include "Make me, O Lord, thy Spinning Wheel complete," and (*) "Thou ill-formed offspring of my feeble brain." This modern-day state was home to the author of "Huswifery," Edward Taylor, as well as to a poet who wrote "I prize thy love more than whole mines of gold" and "if ever two were one, then surely we" in the poem "To My Dear and Loving Husband." For 10 points, name this modern-day state where *The Tenth Muse Lately Sprung Up in America* was written by Anne Bradstreet.

ANSWER: Massachusetts

<JB Other Literature>

6. This thinker responded to John Wisdom's skeptical argument about knowledge of others' mental states in a paper that uses the example of identifying a bird in a garden. In a footnote to one essay, this thinker discussed the difference between shooting a donkey by accident and by mistake. Misinvocations and misfires are ways that one of this thinker's concepts can be infelicitous. This author of "Other Minds" examined requirements for (*) responsibility in his essay "A Plea for Excuses." A book by this philosopher attacks the theory that "we never directly perceive or sense material objects, but only sense-data." This philosopher discussed statements that have no truth value but change something in the world, which he called "performative utterances." For 10 points, name this philosopher who wrote *How to Do Things with Words* and *Sense and Sensibilia*.

ANSWER: John Langshaw Austin

<ES Philosophy>

7. It's not serine, but hydrogen bonding between this amino acid at position 193 and an oxygen atom in the oxyanion hole stabilizes the tetrahedral intermediate in both the acylation and deacylation steps in the mechanism of chymotrypsin. Serine is biosynthesized from this amino acid to form NADH and carbon dioxide during photorespiration. Repeats consisting of this amino acid, alanine, and serine in a 3:2:1 ratio comprise much of the structure of silk fibroin. This amino acid and proline are rarely found in (*) alpha-helices. This amino acid is found in type II beta-turns due to its high flexibility caused by its low steric bulk. This amino acid comprises about one-third of the amino acids in collagen. For 10 points, name this only achiral amino acid, whose side chain is a hydrogen atom.

ANSWER: glycine [accept Gly or G]

<BB Biology>

8. According to Vajrāyana tradition, this figure's consort, the "white-robed one," is red and is named Pāṇḍarāvasini. In Tibet, the Panchen Lama is considered to be the physical manifestation of this figure. In one sūtra, Buddha tells Ānanda the story of this figure's past life as a king who became a monk named Dharmākara. That sūtra, the Infinite Life Sūtra, describes the establishment of (*) Sukhāvatī and the 48 vows that Dharmākara would fulfill upon attaining buddhahood. The 18th of those vows inspired the practice known as *niànfó* in China and as *nembutsu* in Japan, during which the name of this buddha is contemplated or recited. For 10 points, name this buddha, whose name can be called ten times to ensure that one is reborn in his Pure Land.

ANSWER: Amitābha [or Amida Butsu or Ēmítuófó; accept Amitavus]

<WC Religion>

9. Opponents of this government included a newspaper that drove its minister Roger Salengro to suicide with accusations of military desertion and the hood-wearing Cagoule society. Before it came to power, this government's leader was dragged from his car and beaten by a youth group called the King's Camelots. This government dissolved the Cross of Fire, a fascist veterans group. Meetings that this government conducted with trade unions resulted in the Matignon accords, which granted a (*) 40-hour work week. This government collapsed during a controversy over whether to support a Spanish government of the same name against Franco's Nationalists. Antisemitic far-right groups opposed the leader of this coalition, Léon Blum. For 10 points, name this coalition made up of Communists, Socialists, and Radicals that led France from 1936 to 1938.

ANSWER: Popular Front [or Front Populaire; prompt on Blum's premiership; prompt on the French Third Republic]

<JB European History>

10. A character in this play insists "she flogged herself!" when he thinks he is about to be questioned about an officer's widow whom he had beaten. In this play's fourth act, the protagonist is successively approached by a judge, a postman, a school superintendent, and a superintendent of charities, all of whom he asks to lend him money. In this play's last scene, a gendarme's announcement prompts the cast to freeze in shock and remain in those poses for almost two minutes. (*) Dobchinsky and Bobchinsky spot the main character of this play in an inn, after which he is moved to a mansion where he flirts with Anna and her daughter Marya. After the main character proposes to the Governor's daughter and flees town, the title character of this play actually arrives. For 10 points, name this Nikolai Gogol play in which Khlestakov is mistaken for the title official.

ANSWER: The Government Inspector [or The Inspector General; or Revizor; or Inspector]

<JB European Literature>

11. In May 2016, this country's Kaduna state declared a state of emergency after an outbreak of *Tuta absoluta*, a moth nicknamed "tomato Ebola." While standing next to Angela Merkel, this country's leader declared that his wife "belongs to my kitchen" in response to his wife's claim that his government had been hijacked. A militant group from this country has broken up into factions led by Abu Musab al-Barnawi and Abubakar (*) Shekau. In October 2016, that militant group released 21 hostages that it had taken during an attack on the Government Secondary School in this country's town of Chibok. For 10 points, name this country whose president Muhammadu Buhari has been combating a terrorist group affiliated with the Islamic State called Boko Haram.

ANSWER: Nigeria

<WC Other (Current Events)>

12. An artist from this country created an installation featuring a slingshot hanging from a destroyed roof, *The Man Who Flew Into Space From His Apartment*. Dan Flavin's best-known light-tube piece is named for an artist from here who made assemblages called "corner counter-reliefs." An artist from this country claimed "space and time are the only forms" in a "Realist Manifesto" written with his brother Antoine Pevsner. An artist from this country planned to build a glass cube, pyramid, and cylinder that would (*) rotate once every year, month, and day respectively. An artist from here planned a 1,300-foot structure known as his "tower." This country's Constructivist art movement was championed by Naum Gabo and El Lissitzky. For 10 points, name this country that officially advocated socialist realism, the home of Vladimir Tatlin and Ilya Kabakov.

ANSWER: Soviet Union [or USSR; prompt on Russia]

<JB Other Arts (Visual)>

13. If U is an open subset of this set, and F is an injective and continuous map from U to this set, then F is a homeomorphism mapping U to the image of F , according to the "invariance of domain" theorem. Subsets of this set named for Vitali do not have a Lebesgue ("luh-BEG") measure, which extends the concept of length to arbitrary subsets of this set. The affinely extended version of this set is compactified by adding points at plus and minus infinity. This set of numbers is the unique ordered field that forms a completion of the (*) rational numbers. There exists no set with a cardinality between the natural numbers and this set according to the continuum hypothesis. This set of numbers is more often formalized using the Zermelo–Fraenkel axioms. Euclidean space is a higher-dimensional version of this set. For 10 points, name this set of numbers that contains both the rationals and irrationals.

ANSWER: real numbers [accept R; accept Euclidean space or Rn before "Vitali" is read; prompt on "Euclidean space or Rn between "Vitali" and "set of numbers"]

<TW Other Science (Math)>

14. One account claims that this kingdom invented all dice and ball games during a lengthy famine. This kingdom fought Cyaxares in what may be the earliest battle whose date is known to the day, since Thales predicted the solar eclipse that interrupted it. Apocryphally, a ruler of this kingdom was annoyed when a visitor listed Tellus, Cleobis, and Biton as the most fortunate men, but later remembered Solon's warning to "count no man happy until he is dead" as he prepared to be (*) burned on a pyre. The Oracle of Delphi told that ruler of this kingdom that he would destroy a mighty empire if he fought the Persians, a prophecy fulfilled when he lost to Cyrus at the Battle of Thymbra. Gyges founded this kingdom with a capital at Sardis. For 10 points, name this kingdom ruled by the wealthy king Croesus, the first place where coins were minted.

ANSWER: Lydia [or Maeonia]

<JB European History>

15. The conditions in which these constructs change are studied in the "Yale Approach" of Carl Hovland. These constructs can be changed by the peripheral route, which involves superficial factors like an attractive source, or the central route, according to the Elaboration Likelihood Model. Daryl Bem argued that we develop these constructs through self-perception, as an outside observer would. Richard LaPiere took a two-year (*) road trip with a Chinese couple, on which they were only turned away by a hotel once, to demonstrate the gap between these constructs and behavior. These constructs are often analyzed in terms of their strength, accessibility, and ambivalence, and have affective, behavioral, and cognitive components according to the ABC model. For 10 points, name these sets of feelings, beliefs, or opinions of approval or disapproval towards something.

ANSWER: attitudes [prompt on beliefs, opinions, feelings, judgments, or other related words and synonyms]

<JB Social Science>

16. A play by an author of this surname ends with two versions of the character Betty embracing, and has acts set in colonial Africa and in a modern London park. A character of this surname escorts a woman home after she is surrounded by begging gypsy children while leaving a ball. An author of this surname wrote a play in which historical women such as Lady Nijo arrive at a dinner hosted by the title employment agency, as well as the play *Cloud 9*. This is the surname of the playwright of (*) *Top Girls*, Caryl, and of Frank, a character who marries Jane Fairfax in *Emma* by Jane Austen. This is the surname of a politician who won the 1953 Nobel Prize in Literature for books such as *A History of the English-Speaking Peoples*. For 10 points, give this surname of the author of a history of the Second World War, during which he served as Britain's prime minister. ANSWER: Churchill [or Caryl Churchill; or Frank Churchill; or Winston Churchill]

<JB British Literature>

17. Two of this deity's sons, Polygonus and Telegonus, were defeated by Heracles after they were sent to challenge him by Hera. According to Virgil, this god explained that the sickness of some bees was punishment for the death of Eurydice when he was visited by Aristaeus. In Book 8 of the *Metamorphoses*, Achelous compares this god to Erysichthon's daughter Mestra, who shared his best-known ability. This deity's daughter (*) Eidothea advised a hero and his men to capture this god by hiding under some skins. According to Homer, this deity's home was at Pharos, where he once disguised himself as one of its sea lions. This deity was forced to divulge information about the future to Menelaus after being captured. For 10 points, name this shape-shifting Greek deity, the so-called "Old Man of the Sea."

ANSWER: Proteus

<JS Mythology>

18. This letter is the Mulliken symbol for the totally symmetric irreducible representation of a point group. This letter denotes a measure of the steric bulk of a functional group defined as the free energy change between the axial and equatorial conformations when the substituent binds to cyclohexane. This letter denotes a quantity that is *replaced* by a factor of " kT over h " in transition state theory. That quantity is equal to the product of the (*) collision frequency and the steric factor, has units of frequency for a first-order reaction, and is multiplied by e raised to negative activation energy over RT to give the rate constant. For 10 points, the Arrhenius pre-exponential factor is denoted by what letter that denotes attractive interactions between molecules in the van der Waals equation?

ANSWER: A [accept capital A or lowercase a]

<BB Chemistry>

19. An Edward Kienholz work whose title puns on the names of these people is a box that opens to reveal a painting of Caryl Chessman's spread buttocks. A series of paintings focused on these people is thematically similar to its artist's later series depicting Tom Mooney. These people are disproportionately tall in a painting where they stand next to men with picket signs in front of a red brick factory building. The background of a painting titled for these men features a lamppost that resembles a fasces ("FASS-eez"), and a portrait of a judge who seems to be saluting it. These (*) two men, one clean-shaven and one with a handlebar mustache, sit handcuffed together in a painting by an artist who also depicted three men holding daisies as they stand over the coffins of these two men. For 10 points, Ben Shahn depicted the "passion" of what pair of Italian anarchists who were executed in 1927?

ANSWER: Nicola Sacco AND Bartolomeo Vanzetti [prompt on Italian-Americans or anarchists until "two" is read]

<JB Painting>

20. The policies of a holder of this position led “Buck” Kilgore to kick his way through a locked door while shouting “make way for liberty!” The absence of his supporters, who were off getting drunk for St. Patrick’s Day, doomed a holder of this title who was succeeded by Champ Clark. A man with this position nicknamed “Uncle Joe” was opposed by a George Norris-led faction in a 1910 (*) revolt which curtailed his powers. A man in this position counted people as present even if they didn’t vote to combat the “disappearing quorum” tactic via one of his namesake rules. Joseph Cannon and Thomas Reed served in this position, and were both nicknamed “Czar” for their control of discussion and committee appointments. For 10 points, name this position which presides over the lower house of the US Congress.

ANSWER: Speaker of the House

<JB American History>

Bonuses

1. This man was alleged to have buried the bodies of his opponents under Brush Creek Plaza. For 10 points each:
[10] Name this political boss who controlled a machine in Jackson County. His machine broke down when he was betrayed by his associate, Governor Lloyd Stark.

ANSWER: Thomas “Tom” **Pendergast**

[10] Pendergast controlled the political machine of this state’s Kansas City, where he helped launch the career of Harry Truman.

ANSWER: **Missouri**

[10] This Secretary of the Treasury under Franklin Roosevelt brought down Pendergast as part of a crackdown on corruption. His namesake “plan” proposed the elimination of Germany’s military industry after World War II.

ANSWER: Henry **Morgenthau**, Jr.

<AP American History>

2. A mathematical model presented in this paper indicates that although there are traders willing to buy and sell a certain good at prices between 0 and 3, no trades will take place. For 10 points each:

[10] Name this paper by George Akerlof. It uses the example of the market for a certain good to examine how asymmetric information in a market can result in adverse selection.

ANSWER: “The **Market for ‘Lemons’**: Quality Uncertainty and the Market Mechanism”

[10] In “The Market for ‘Lemons,’” Akerlof applied the Lemons model to the market for this service, in which adverse selection takes place because people who carry more risk are more likely to want this service.

ANSWER: **insurance** [accept specific types like **health insurance** or **life insurance**]

[10] Akerlof won the 2001 Nobel Memorial Prize in Economics along with Joseph Stiglitz and this other economist, who described how education can serve as a signal to employers in his 1973 paper “Job Market Signalling.”

ANSWER: Michael **Spence**

<WC Social Science>

3. Upon seeing a bloody sword, this character’s lover breaks down and confesses her love for him. For 10 points each:

[10] Name this character who kills his lover Chimène’s father Don Gormas in a duel. In retaliation, Chimène forces him to duel against Don Sanche, but he spares Don Sanche’s life.

ANSWER: Don **Rodrigue** [or **Le Cid**; do not accept or prompt on “El Cid”]

[10] Don Rodrigue receives the honorary title “Le Cid” in this French tragedian’s play of that name. This playwright had a public dispute with Cardinal Richelieu over the play despite the Cardinal’s assistance in his rise.

ANSWER: Pierre **Corneille** (“cor-NAY”)

[10] *Le Cid* is based on a play by Guillén (“gee-YEN”) de Castro, a playwright from this nation. The foremost playwrights from this nation’s Golden Age were Lope de Vega and Pedro Calderón de la Barca.

ANSWER: **Spain** [or **España**]

<AP European Literature>

4. This term is sometimes used to refer to the crater lakes that often fill them, such as Lake Nyos. For 10 points each:

[10] Name these features that form because of phreatic eruptions. Diatremes lie below these features.

ANSWER: maars [prompt on craters]

[10] Phreatic eruptions occur when magma encounters this substance. Artesian wells are drilled into strata containing this substance.

ANSWER: groundwater

[10] Based on size, this material is classified as blocks, bombs, lapilli, or ash. This term refers to solid rock particles that are ejected into the air during a volcanic eruption.

ANSWER: tephra

<SR Other Science (Earth Science)>

5. This duet opens with lyrics about the “jasmine white” under a “leafy dome.” For 10 points each:

[10] Name this duet for sopranos from Léo Delibes’s *Lakmé*, which is most commonly titled for the objects that Lakmé and Malika have gone near a river to obtain.

ANSWER: “Flower Duet” [or *Duo des fleurs*; or *Sous le dôme épais*]

[10] In the first act of this Georges Bizet opera, the title gypsy throws a flower to the Corporal of the Dragoons, Don José (“zho-SAY”).

ANSWER: Carmen

[10] This opera’s title character promises the love-struck Narraboth a “little green flower” in exchange for his help. It opens with a rising clarinet scale and the “obsessed” title character’s leitmotif, and ends with a “sickening chord” framed by C-sharp major.

ANSWER: Salome (by Richard Strauss)

<JH Other Arts (Opera)>

6. This crusader order allegedly engaged in “indecent kissing,” and the worship of cats and a bearded, severed head. For 10 points each:

[10] Name this oft-mythologized crusader order whose members wore a white mantel with a red cross. After they were destroyed by Philip IV of France, much of their property was turned over to the Knights Hospitallers.

ANSWER: Knights Templar [or Order of Solomon’s Temple; or Poor Fellow-Soldiers of Christ and of the Temple of Solomon]

[10] The fifth pope to take this name suppressed the Templars at the Council of Vienne and moved the papacy to Avignon, thus beginning the Babylonian Captivity.

ANSWER: Clement V [or Clemens V]

[10] The founder of this group, Roger de Flor, was a member of the Templars until he was expelled for piracy. This mercenary company fought the Turks for the Byzantines and later seized the duchy of Athens.

ANSWER: Catalan Company

<JH European History>

7. The theorizer of this principle stated it was “infinite and self-ruled, and is mixed with nothing, but is alone, itself by itself.” For 10 points each:

[10] Identify this principle that a Pre-Socratic philosopher believed started the rotation of the universe and mixes all substances so that “everything is in everything.” Either the Greek term or its English translations are acceptable.

ANSWER: nous [or Mind; or Intellect]

[10] Anaxagoras, the theorizer of *nous*, is ridiculed for believing that food contains bits of blood and bone in this Roman thinker’s didactic poem *On the Nature of Things*, which also discusses the swerving of atoms.

ANSWER: Lucretius [or Titus Lucretius Carus]

[10] In this dialogue, Socrates points out that his accuser Meletus has wrongly attributed Anaxagoras’s theory, that the Sun is a fiery stone, to him. This dialogue centers on a speech given by Socrates at his trial for impiety.

ANSWER: *The Apology of Socrates*

<JB Philosophy>

8. In a satirical poem, St. Peter kicks this person into a lake when he tries to read a poem praising King George III at Heaven’s gate. For 10 points each:

[10] Name this poet who accused Byron and Shelley of being part of the “Satanic School of Poetry” in *A Vision of Judgement*, prompting Byron to mock him in his similarly-titled response, *The Vision of Judgement*.

ANSWER: Robert Southey

[10] John Gibson Lockhart described Leigh Hunt’s poetry as being part of a school named for this accent. A flower girl who speaks in this working-class London accent is trained by Henry Higgins in Shaw’s play *Pygmalion*.

ANSWER: Cockney

[10] In 1871, Robert Buchanan attacked this poet, as well as Rossetti and Morris, for being part of the immoral “Fleshly School of Poetry.” This poet wrote “Hymn to Proserpine” and *Atalanta in Calydon*.

ANSWER: Algernon Charles Swinburne

<JB British Literature>

9. These molecules belong to the I-sub-h point group, since they have icosahedral symmetry. For 10 points each:

[10] Name these compounds composed of 60 atoms whose structure resembles that of a soccer ball.

ANSWER: buckminsterfullerenes [or buckyballs; prompt on fullerenes]

[10] Buckyballs are an unusual allotrope of this element, whose other allotropes include their namesake “nanotubes,” graphene, and diamonds.

ANSWER: carbon [or C]

[10] Single-walled carbon nanotubes can be described as having “armchair,” “zigzag,” or this type of conformation, whose wrapping orientation is described by a vector equal to some arbitrary linear combination of the basis vectors of the hexagonal lattice.

ANSWER: chiral

<BB Chemistry>

10. In a treatise opposing this man's style, Roger de Piles ("roh-JAY duh PEEL") gave 56 painters ratings from 0 to 18 in terms of composition, drawing, expression, and color. For 10 points each:

[10] Name this artist who names a faction in the French Royal Academy that opposed the Rubenistes by championing drawing over color. This French artist painted shepherds before a tombstone in *Et In Arcadia Ego*.

ANSWER: Nicolas **Poussin** ("poo-SANN")

[10] Roger de Piles savagely gave this artist a zero in expression and sixes in composition and drawing. Paintings such as Hendrick ter Brugghen's *The Concert* and Gerard van Honthorst's *The Matchmaker* imitate the style of this painter.

ANSWER: **Caravaggio** [or Michelangelo Merisi da **Caravaggio**]

[10] One of Roger de Piles's Poussiniste opponents, Charles le Brun, painted part of the ceiling of the Hall of Mirrors in this opulent palace built for Louis XIV.

ANSWER: Palace of **Versailles** [or Château de **Versailles**]

<JB Painting>

11. In one city, this animal was adorned with golden horns and jewelry, then mummified after its death as part of its worship as Petsuchos. For 10 points each:

[10] Identify this animal that inspired the Greek name for the ancient Egyptian city of Shedet. Neith was sometimes pictured nursing two babies of this animal.

ANSWER: Nile **crocodiles** [do not accept "alligators"] (The city is Crocodilopolis.)

[10] "Petsuchos" means "offspring of" this son of Neith, an unsurprisingly crocodile-headed god of the Nile River.

ANSWER: **Sobek** [or **Sochet**]

[10] Although Sobek is not related to this god, crocodiles were said to have come from this god's body. This god killed his brother Osiris and spread out his body parts.

ANSWER: **Set** [or **Seth**; or **Sutekh**]

<AP Mythology>

12. Poems in this collection include a supposed fragmentary epic by Jonathan Swift Somers, and another claims that "It takes life to love life." For 10 points each:

[10] Name this collection of poems by Edgar Lee Masters that catalogues the lives of the inhabitants of the title town, such as Lucinda Matlock and Fiddler Jones, through their epitaphs.

ANSWER: **Spoon River Anthology**

[10] This first poem of *Spoon River Anthology* asks "where are Elmer, Herman, Bert, Tom, and Charley...?" and answers that they "all are sleeping" on the title location outside of the town.

ANSWER: "The **Hill**"

[10] One resident of Spoon River is named only for this belief. He claims to be "versed in the arguments / Of the infidels" and tells "ye who lives in the senses" that "Immortality is not a gift," but an "achievement."

ANSWER: **atheism** [or word forms like **atheist**]

<JH American Literature>

13. Answer the following about Natalie Zemon Davis's *Society and Culture in Early Modern France*, for 10 points each.

[10] The book's final essay examines how this industry created new networks of communication in the 16th century. This industry used a device based on movable type that was invented by Johannes Gutenberg.

ANSWER: printing [or publishing; or making books, pamphlets, or similar answers]

[10] "The Reason of Misrule" discusses this custom, which involved a humiliating parade accompanied by raucous music. This custom was the namesake of a French satire magazine imitated by *Punch*.

ANSWER: charivari [or chivaree; or skimmington ride]

[10] The book's first essay documents printers' strikes in this French city, where silk workers called *canuts* ("kah-NOO") worked on Jacquard looms. Two church councils were held in this city, the site of Roman Lugdunum.

ANSWER: Lyon [or Lyons]

<JB European History>

14. The potential required to create one of these systems is proportional to the polarizability times the squared intensity of the electric field. For 10 points each:

[10] Name these spatially periodic polarization patterns formed by interfering laser beams. Their name references the fact that atoms trapped in these structures exhibit properties analogous to the properties of electrons in crystal structures.

ANSWER: optical lattices

[10] Optical lattices are useful for trapping atoms that exist at states very close to this lowest achievable temperature. The entropy of a perfect crystal in this state is equal to zero by the third law of thermodynamics.

ANSWER: absolute zero [accept zero kelvins or zero degrees Rankine]

[10] Atoms become trapped in optical lattices due to the AC form of this effect, in which the energy levels of a quantum system are shifted in response to an applied electric field.

ANSWER: Stark effect

<SR Physics>

15. Gordon Sprigg's implementation of the 1878 Peace Preservation Act resulted in the natives of this country rebelling in the 1880 Gun War. For 10 points each:

[10] Name this modern-day country where Moorosi and his sons were beheaded and skinned after he led a failed uprising of Basuto tribespeople against annexation by the Cape Colony.

ANSWER: Lesotho [prompt on Basutoland]

[10] While known as Basutoland, Lesotho joined other tribes during the *mfecane* ("um-feh-KAH-nay"), a forced dispersal imposed by this Zulu leader who pioneered the "buffalo horn" formation.

ANSWER: Shaka Zulu [or Shaka kaSenzangakhona]

[10] Lesotho was unified by this Basuto monarch who named himself the "Razor" and fortified Thaba Bosiu Hill. He later defeated the Boers in Senekal's War and Seqiti's War.

ANSWER: Moshoeshe I ("mu-SHWAY-shway") [or Letlama]

<AP World History>

16. This piano sonata's rondo finale begins in C minor with a long G octave in the left hand, then, like the finale of Beethoven's String Quartet No. 13, cheerfully modulates down a step. For 10 points each:

[10] Name this piano sonata written months before Schubert's early death in 1828. A mysterious G-flat trill in the bass intrudes eight measures into this sonata, and its C-sharp minor slow movement unusually ends in major.

ANSWER: Piano Sonata in **B-flat** major by Franz Schubert [or D. **960**; accept Piano Sonata No. **21** (or No. **23**) by Franz Schubert; accept descriptions like the **final** piano sonata by Franz Schubert]

[10] Schubert wrote 8 pieces in this free-form genre invented by Jan Votršek; the first one opens with held G octaves in both hands. A Chopin piece in this genre, prefixed "Fantaisie," opens with a long G-sharp octave in the left hand.

ANSWER: **impromptus**

[10] *Fantaisie-Impromptu* launches into a 4-against-3 cross-rhythm, an example of the "vertical" type of this device. This syncopation-like device of juxtaposing duple and triple rhythm appears in many Baroque cadences, Schubert impromptus, and works by Brahms.

ANSWER: **hemiola** [or **hemiolia**; accept vertical **hemiola**]

<OL Music>

17. Answer the following about smart cards used for public transport that are named after aquatic animals. For 10 points each:

[10] You can use your Oyster card to get access to the Underground, this city's railway system that is visualized by the Tube Map. One can ride the red double-decker AEC Routemaster to sightsee in this English city.

ANSWER: **London**

[10] In this country, you can use your Snapper card to pay for taxis or groceries as well as public transport. After ferrying back from Stewart Island, you can visit Dunedin ("dun-EE-din"), the world's second city to use the cable car.

ANSWER: **New Zealand** [or **Aotearoa**]

[10] You can't use the Octopus card to pay for red or green taxis in this territory, but if you're going to Lantau Island, that's not a problem since only blue taxis can go there. You can take the Peak Tram to get a skyline view of this territory's Victoria Harbor.

ANSWER: **Hong Kong** [or **Xiānggǎng**; do not accept or prompt on "China" or "People's Republic of China"]

<AP Other (Geography)>

18. Answer the following about the color white in Latin American poetry, for 10 points each.

[10] This poet wrote about a white rose that he gives "to the true friend" as well as "the cruel one whose blows / Break the heart by which I live" in a poem in his collection *Versos Sencillos*.

ANSWER: José Julián **Martí** Pérez

[10] This Argentine poet of "Squares and Angles" claims "You want me pale, / Made of sea foam, / A mother of pearl" in her poem "You Want Me White."

ANSWER: Alfonsina **Storni**

[10] This man described "white hills, white thighs" in his poem "Body of a Woman" that can be found in his collection *Twenty Love Poems and a Song of Despair*.

ANSWER: Pablo **Neruda** [or Neftali Ricardo **Reyes** Basoalto]

<ES Other Literature>

19. Answer the following about entities worshipped by various polytheists in the Old Testament. For 10 points each:

[10] In the deuterocanonical 14th chapter of the Book of Daniel, Daniel exposes Bel as a fraud by proving that it did not perform this action. Instead, a group of seventy priests and their families performed this action on Bel's behalf.

ANSWER: eating food [or equivalents; accept drinking wine or equivalents]

[10] In that same chapter, Daniel kills one of these mythical creatures without using "sword or club" by feeding it balls of pitch, fat, and hair, causing it to burst. Saint George also slew one of these mythical creatures.

ANSWER: dragons

[10] In the Book of Jeremiah, women are said to knead dough to make cakes for the Queen of Heaven, sometimes thought to be a reference to this consort of El, who may also have been worshipped as the consort of Yahweh.

ANSWER: Asherah [or Atirat; accept Elat]

<WC Religion>

20. Two of these structures are joined together by glue-like pectin in the middle lamella. For 10 points each:

[10] Name these extracellular structures that are composed of xylan, lignin, and cellulose. These structures help plant cells maintain their shape.

ANSWER: cell walls

[10] Cytoplasm can flow between plant cells through these structures that are analogous to gap junctions in animal cells.

ANSWER: plasmodesmata

[10] Auxins activate a proton pump that acidifies the cell wall, thus activating these proteins that break hydrogen bonds between cellulose microfibrils, allowing for stretching of the cell wall during cell growth.

ANSWER: expansins

<SY Biology>