

### Tossups

1. Jose Quintero's staging of this play for Circle in the Square in 1956 revived its author's reputation. Its first act ends with laughter at a story about a doctor who died of overwork selling snake oil, which fades away into silent resentment when a sleeping man wakes up and says "don't let me bet a wet blanket--all I want is to see you happy." In its third act, Cora leaves to marry Chuck Morello, and Willie Oban gets his good clothes back from Solly's and resolves to see the District Attorney. Its final act is dominated by a long monologue in which a character describes his guilt over being constantly forgiven for cheating on his wife Evelyn, causing him to kill her. At the end of this play, Don Parritt confesses that he turned his mother in to the police out of hatred, and commits suicide on the urging of Larry Slade. It focuses on a traveling salesman who destroys the spirit of the other characters by convincing them to give up their "pipe dreams." For 10 points, name this late play by Eugene O'Neill in which Hickey brings death instead of peace to Harry Hope's bar.

ANSWER: *The Iceman Cometh*

2. Some non-standard types of these entities that can result from non-planar faulting are known as rollovers and ramps. Concentric, symmetrical sets of these can be created by diapirism. Extreme examples of these can form through so-called aneurysms, which usually occur when isostasy responds to erosion near the center of a river. Their tops are relatively impermeable, so folds in them are highly sought as structural traps for valuable minerals like petroleum. By definition, these structures obey the usual principle of superposition and are convex-up. For 10 points, name these features of the Earth in which strata curve upward to form a ridge and that are often surrounded by their converses, synclines.

ANSWER: anticlines [prompt on domes]

3. This work begins with a theme its composer originally wrote for a never-completed set of variations on Schubert's "Trauerwalzer." A section near the middle of this work anachronistically uses breves to indicate three short sequences of notes, which are often omitted in performance. Like its composer's Opus 2, this work ends by quoting the "Grandfather's Dance" to attack musical reactionaries. It represents Ernestine von Fricken as "Estella" and the composer's wife as "Chiarina," and incorporates a musical cryptogram based on the notes A-E flat-C-B, which stand for the letters A-S-C-H. Its composer's Opus 9, it includes pieces named for its composer's divided personas Florestan and Eusebius, as well as short pieces representing Paganini, Chopin, and Clara Wieck. Consisting of twenty short piano pieces, for 10 points, name this work by Robert Schumann which evokes a festival.

ANSWER: Carnaval, *Scènes mignonnes sur quatre notes* [or Robert Schumann's Opus 9 before mentioned]

4. This man's diplomatic mission to Istanbul allowed him to avoid capture after the Surrender at Vilagos, despite the fact that he had served as an adjutant to Arthur Gorgey. Shortly before entering his highest office, this man and his predecessor, Count von Beust, successfully conspired to thwart the Hohenwart plan for a federalist government. To support his policy of *Ausfalltor*, or "springboard", this man controversially advocated the military occupation of the Sanjak of Novi Pazar, which led to his political downfall. This man issued an ultimatum to the Ottoman government demanding autonomy for Bosnia and Herzegovina. That namesake "note" was part of this man's policy of expanding into the Balkans to compensate for losses to Italy and Prussia, as was his opposition to the Treaty of San Stefano. For 10 points, name this Foreign Minister who represented Austria-Hungary at the Congress of Berlin.

ANSWER: Julius Andrassy [or Gyula Andrassy de Csikszentkiraly et Krasznahorka]

5. As a child, one character in this poem made fun of the hunchbacked servant Kooni, causing her to nurse a lifelong grudge against him. Another character in this poem tries to kill his brother after pursuing Mayavi underground and finding the way back blocked with mountains. Kamban wrote a popular version of this poem, whose climax features a battle in the air with a character who rides the flying chariot Pushpak Viman. One of its main characters realizes he's been tricked after trying to catch an elusive golden deer. Part of this poem is set in the forest Dandakaranya, where its protagonist slices the nose off of the horny demon Soorpanaka after Kaikeyi forces Dasaratha to exile him for fourteen years. Written by Valmiki, it focuses on a prince who uses a bridge to Sri Lanka and assistance from the monkey Hanuman to defeat the demon Ravana. For 10 points each, name this Indian epic poem about the title character's search for his wife Sita.

ANSWER: *The Ramayana*

6. After the starting material in this reaction is deprotonated, it reacts with the halogen to form an N-haloamide. This intermediate is itself deprotonated, leading to a migration of the R group from carbon to nitrogen, causing the halogen to leave and producing an unstable compound also seen in similar reactions by Lossen, Schmidt, and Curtius. That compound, an isocyanate, dissociates to form carbon dioxide and the final product. A different reaction sometimes called exhaustive methylation that involves the conversion of a quaternary ammonium salt to an alkene and an amide was also described by this reaction's namesake. For 10 points, name this reaction that converts a primary amide to a primary amine that has one fewer carbon.

ANSWER: **Hofmann rearrangement** [or **Hofmann degradation**; prompt on **Hofmann**; do not accept "Hofmann elimination"]

7. One philosopher with this surname distinguished between "Episodic" and "Diachronic" people, and argued that both psychological and ethical narrativity were unnecessary in the aptly titled paper "Against Narrativity." That philosopher with this surname also formulated what he called his "basic argument" against the possibility of moral responsibility, by attempting to show that in order to be truly morally responsible, one must have been one's own cause. Another philosopher with this surname coined the term "descriptive metaphysics," as a contrast to what he called "revisionary metaphysics," in his 1959 work *Individuals*. That thinker with this surname also authored the essay collections *Freedom and Resentment* and *Entity and Identity*, as well as an analytic interpretation of Kant's *Critique of Pure Reason* titled *The Bounds of Sense*. For 10 points, identify this surname shared by the father-son philosophical duo of Galen and Peter Frederick.

ANSWER: **Strawson**

8. According to one story, this city's name derives from a female slave who operated one of its first warehouses. This city was once home to the Madugu Palace. The architect Abu Es Haq designed many of this city's buildings, and it is here that you can find the Sidi Yahya Mosque. This city became the center of a namesake Pashalik ruled by the Arma, aristocrats descended from a military force that had conquered it. This city was home to the scholar Ahmad Baba, for whom its largest library is named. The Frenchman Rene Caillie was the first European to return alive from visiting this city. This city is home to the Djinguereber Mosque. This city's most notable landmark may be Sankore University, founded at the height of this city's importance as a port on the Niger River and a center for the salt and gold trades. For 10 points, name this seat of the musas, the capital of the Mali Empire.

ANSWER: **Timbuktu**

9. An important ceremony undergone by these people involved a singing stone phallus standing near the grave of one of them who had the epithet "of the Nine Hostages." A building belonging to this group was repeatedly burned down until a hero was able to keep awake by stabbing himself with a poisoned spear in order to kill the arsonist Aillen; that location is the Palace of Tara, where these nobles lived before moving to Cashel. The earliest historical ones are Niall Noígíallach and his son Lóegaire, who may have converted to Christianity. In some stories, this position was determined by the screaming of the Lia Fáil or Stone of Destiny, one of its nation's four treasures. The *Baile Chuind* lists the first two dynasties of these rulers, the Dál Cuinn and Uí Néill. For 10 points, name this royal title held in the 11th century by Brian Boru.

ANSWER: **High King** of Ireland [or **Ard Rígh Érenn**; accept **King** of **Tara** before mentioned; prompt on **King**]

10. Bonsai trees and African masks feature prominently in two of the paintings from this artist's late *Interiors* series. He was inspired by scroll paintings from the Song dynasty for his series, *Landscapes in the Chinese Style*. Leo Castelli provided the frame this artist used for his riff on Gilbert Stuart's portrait of George Washington. This man's divorce from his wife Isabel Wilson inspired a painting where a crying blonde woman lies face down on a bed titled *Hopeless*. This artist was inspired by a Tony Abuzzo work for a painting that sold for \$43 million in 2012. A machine gun discharges ammo in this artist's *Takka Takka*, while in one of his best known paintings, a blue-haired woman sinks into turbulent water. This man created *Torpedo...Los!* and *Ohhh...Alright*. For 10 points, name this pop artist who used benday dots in *Whaam!*

ANSWER: Roy (Fox) **Lichtenstein**

11. The result in this theory is proportional to preformation probability times the encounter frequency, both of which come out of a shell model. The normalized probability current density at the outer turning point is the desired quantity in this model; that probability is the negative exponential of a quantity denoted capital-G and equal in the WKB approximation to the twice the wave number integrated over the barrier width. Originally derived using a square well potential, this model gives a better result when a chopped Coulomb potential is used. This result can be rearranged to reproduce an observed correlation according to which log half-life varies with one over the square root of the Q-value; this theory thus explains the Geiger-Nuttall law. For 10 points, name this theory that uses tunneling to explain alpha decay and that was derived by a Russo-American physicist.

ANSWER: the **Gamow** theory of alpha decay

12. Retha Warnicke controversially claimed that Francis Weston and William Brereton were accused of sodomy during this event. Jane Parker testified against her own husband during this event, which resulted in the beheading of Sir Henry Norris. The Viscount of Rochford was accused of incest during this legal proceeding. The star witness for the prosecution was Mark Smeaton, a Flemish musician whose guilty plea may have been induced by torture. The poet Sir Thomas Wyatt was imprisoned as a result of this event. Most historians agree that the charges of treason, adultery, and witchcraft made at this event were fabrications orchestrated by Thomas Cromwell. For 10 points, name this event that resulted in the execution of Henry VIII's second wife.

ANSWER: Trial of Anne Boleyn

13. Blundell et al. pioneered the sequential maximum path approach to counter the criticism of low power in statistical tests of this theory. That critique arose from the observation that data sets used to test this theory showed consistent increases in wages during the post world-war period, making it difficult to reject this theory's predictions. Afriat also proposed the "cyclical consistency" criterion equivalent to the generalized axiom of this theory. H. S. Houthakker postulated the "strong form" axiom of this theory, which suggests the existence of well-behaved indifference curves. Behavioral economists point to context effects as an argument against the normative interpretation of its namesake observations. This theory relies on observations of consumption bundles and prices to construct utility functions for agents. For 10 points, identify this theory pioneered by Paul Samuelson, which uses observed choices to infer the responses of economic agents.

ANSWER: revealed preferences [prompt on consumer choice theory; prompt on partial answer]

14. This novel discusses the nature of sadism after its narrator spies on a young girl who is goaded by her lesbian lover to spit on a photograph of her dead father. In its final pages, its narrator wistfully contemplates the changes that have taken place in the Bois de Boulogne. The central character of its longest section falls in love with a woman because of her resemblance to Botticelli's painting of Zipporah, and then becomes consumed with jealousy over her. This novel introduces its narrator's love interest Gilberte, as well as the "little clan" of the Verdurins. It begins with an "overture" about its narrator's wish for his mother to kiss him good night, and focuses on a man who becomes infatuated with the courtesan Odette. Its narrator recalls his childhood in Combray after tasting a tea-soaked madeleine. For 10 points, name this novel by Marcel Proust, the first volume of *In Search of Lost Time*.

ANSWER: Swann's Way [or Du Cote de Chez Swann; prompt on In Search of Lost Time or Remembrance of Things Past or A la recherche du temps perdu until mentioned]

15. As part of this religion's child-naming ceremony, a holy man turns to a random page of scripture, reads the first word he sees, and gives the child a name beginning with the same first letter. Members of this religion perform the Bhog ceremony after completing something, and at major life milestones may perform the ceremony of Akhand Path, which involves 48 hours of reading scripture. This religion uses the term "hukam" to refer to the divine will. The holiday of Vaisakhi commemorates the first five men to be formally initiated into this religion, which involves being anointed with sugar water. A visitor to one of this religion's places of worship may hear the Ardas prayer and will be offered Sacred Pudding. Adult members of this religion are considered members of the Khalsa Order and wear a bracelet, a comb, and a kirpan dagger. For 10 points, name this religion founded by Guru Nanak.

ANSWER: Sikhism

16. A pompous character in this opera describes his dream about a donkey which grows feathers and flies to the top of a steeple in the aria "Miei rampolli femminini." At the end of its opera, its female lead rejoices at her good fortune in the aria "Non piu mesta." Throughout this opera, its main character sings "Un volta c'era un re," a wistful aria about a king who marries a young girl like her. In its first act, Alidoro disguises himself as a beggar and is given food by its main character, who later gives its male lead one of her matching bracelets and tells him to find her. This opera is set in the house of Don Magnifico, who hopes that Prince Ramiro will marry one of his mean-spirited daughters Clorinda and Tisbe. However, the prince ends up falling in love with the title character, Angelica. For 10 points, name this Rossini opera based on a fairy tale about an oppressed woman forced to work as a maid.

ANSWER: Cinderella [or La Cenerentola]

17. While riding in a car, the narrator of this novel dreams that her husband brushes a woman's hair into a thick snakelike rope and puts it around his neck. This novel is mainly set in a location lined by enormous blood-red rhododendrons. Near the end of this novel, its main characters visit Dr. Baker, who reveals that a woman who came to him was suffering from inoperable cancer, satisfying Colonel Julyan's investigation. Its narrator nearly commits suicide until rockets fire over a cove, announcing the discovery of a dead woman who cheated on her husband with Jack Favell. In a key scene, its narrator shocks the guests at a costume ball by wearing a dress specially ordered by Mrs. Danvers, who is devoted to the memory of the title character. It begins with the line "Last night I dreamt I went to Manderley again." For 10 points, name this novel about the dead wife of Maxim de Winter, written by Daphne du Maurier.

ANSWER: Rebecca

18. This man caused a scandal by trying to make the disgraced Charles P. Stone his chief of staff. This man suffered a foot wound in the cornfield at Antietam while leading a charge against Stonewall Jackson. This general resigned as a Corps Commander after not being appointed to replace the late James McPherson as head of the Army of the Tennessee. This man told the New York Times that "nothing would go right" until the United States had a dictator, after which Lincoln reminded him that only victorious generals can establish dictatorships. This man was selected over William Sherman to command the charge up Lookout Mountain at the Battle of Chattanooga. This man achieved his highest post after he criticized his commander for the disastrous "Mud March". At his most famous battle, this man faced a numerically inferior and divided army, yet still lost to Stonewall Jackson and Robert E. Lee. For 10 points, name this Union general best known for his defeat at Chancellorsville.

ANSWER: Joseph Hooker

19. In "The Paranoid Style in American Politics," Richard Hofstadter wrote that this belief "has always been the pornography of the Puritan." A book which fanned the flames of this belief described lurid sexual abuses against innocent girls in the Hotel Dieu. Lyman Beecher's speech "A Plea for the West" inspired an upsurge in this belief in New England. Encouraged by books such as *The Awful Disclosures of Maria Monk*, this belief sparked the Bloody Monday riots in Louisville in 1855. This belief inspired a Thomas Nast cartoon titled "The American River Ganges", in which crocodiles emerge from the water to attack American schoolchildren. Along with nativism, this prejudice was key to the growth of the Know-Nothing Party. In the 20th century, adherents of this prejudice viciously opposed the presidential campaign of Al Smith. For 10 points, name this view, which is hostile to adherents of the Bishop of Rome.

ANSWER: Anti-Catholicism [or anti-Roman Catholicism; or equivalents like anti-Catholic sentiment; prompt on nativism before mentioned; prompt on "anti-clericalism"]

20. They have been classified in 6 superfamilies, with those that do not form a ring structure in the first two superfamilies. Cockayne syndrome results from errors in XPD, a domain with this type of activity, while mutations in RecQ family examples can cause Bloom syndrome or Werner syndrome. Proteins in the SWI and SNF families do not carry the namesake activity, although they have domains with this function. SV40 large tumor antigen was the first viral protein found to have this activity on DNA. Types of these that act on RNA include DEAD box proteins, while one of these that act on DNA in bacteria, DnaB, forms a hexamer that pushes open the replication fork. For 10 points, name these enzymes that unwind strands of nucleic acids.

ANSWER: helicases

## Bonuses

1. This building contains an “eye” at the center of its massive dome, 143 feet above the ground. For 10 points each:

[10] Identify the Roman temple first constructed during the reign of Marcus Agrippa, but rebuilt by Hadrian. It is devoted to all of the Roman gods.

ANSWER: The Pantheon

[10] An earlier round temple on a much more modest scale than the Pantheon was named for one of these figures and constructed in Tivoli. They’re not prophets, but five of these figures are depicted seated on the ceiling of the Sistine Chapel.

ANSWER: Sibyls

[10] The largest building in the Roman forum drew its inspiration from the baths of Diocletian and Caracalla and was constructed by this emperor. A basilica constructed by this emperor in Trier is known as the Aula Palatina.

ANSWER: Constantine the Great [or Constantine I or Saint Constantine; prompt on Constantine]

2. Elias Canetti wrote a book extolling the literary genius of this author’s letters to Felice Bauer. For 10 points each:

[10] Name this author, who also wrote a long letter describing his lifelong fear of his domineering father Hermann. Many critics use that letter to explain one of this author’s short stories, in which a man commits suicide after his father sentences him to death by drowning.

ANSWER: Franz Kafka

[10] Kafka never finished this novel, in which K. arrives in a nameless village and struggles to gain access to the title fortress.

ANSWER: *The* Castle [or *Das* Schloss]

[10] This short story by Kafka is narrated by a creature who is terrified of being attacked and attempts to seek a state of perfect security. In its final pages, its narrator hears a noise which gets increasingly louder and becomes convinced that a great beast is coming towards him.

ANSWER: “The Burrow” [or “Der Bau”]

3. According to this theorem, a physical theory containing  $n$  parameters and having a dimensional matrix with rank  $k$  can be re-cast as a theory in  $n$  minus  $k$  dimensionless variables. For 10 points each:

[10] Name this theorem which also contains a parameter reduction scheme. It is named for the fact that the dimensionless variables are products of the parameters.

ANSWER: the Buckingham  $\pi$  theorem

[10] Two systems with the same governing equations and that have the same values for their dimensionless variables are called this. Good model systems have this relationship to the system under study.

ANSWER: similarity

[10] Proving the strong form of Buckingham’s  $\pi$  theorem requires this theorem. According to this theorem, if a vector function  $f$  satisfies  $f$  of  $t \cdot x$  equals  $t$  to the  $n$  times  $f$  of  $x$  for all scalars  $t$  and some fixed  $n$ , then  $x \cdot \text{grad } f$  equals  $n$  times  $f$  of  $x$ . The relation satisfied by  $f$  provides the name of this theorem.

ANSWER: Euler’s homogeneous function theorem

4. A person who uses this device is called a Ba’al Tq’iah or a Tokea. For 10 points each:

[10] Name this device, used to announce the Jewish New Year.

ANSWER: shofar

[10] While the shofar must be made from the horn of an animal, there is no restriction on the type of animal, and even a non-kosher animal may be used. The animal does not even have to be slaughtered through this type of ritual slaughter that is otherwise required for kosher meat.

ANSWER: schechita

[10] The shofar is blown before and after this service, which the Reform movement omits. On Shabbat, it comes immediately after the Torah service. In Orthodox Judaism, it is still debated whether women are obligated to pray this service and on Shabbat, this service generally includes Ein Keloheinu and Aleinu.

ANSWER: Mussaf

5. This man's top general, Sanada Yukimura, was killed at the Battle of Tennoji. For 10 points each:

[10] Name this son of Toyotomo Hideyoshi, for whom a Council of Regency was established.

ANSWER: Toyotomo Hideyori

[10] Hideyori spent his last years holed up in this castle, which was besieged by the Tokugawa. He committed ritual suicide as this castle burned down.

ANSWER: Osaka Castle

[10] Toyotomi Hideyoshi defeated the assassins of Oda Nobunaga at this 1582 battle; he had built Osaka Castle as his stronghold shortly thereafter.

ANSWER: Battle of Yamazaki

6. For 10 points each, name these American authors who wrote about sports.

[10] This author celebrated Ted Williams' final game in his essay "Hub Fans Bid Kid Adieu." He also wrote four novels about the life of high school basketball star Harry "Rabbit" Angstrom.

ANSWER: John Updike

[10] This journalist wrote about a fictional Mets pitcher who studied yoga to throw 168 mile per hour fastballs in his *Sports Illustrated* article "The Curious Case of Sidd Finch." He co-founded *The Paris Review* and served as its chief editor until 2003, and described his attempt to compete for the Detroit Lions third-string quarterback job in his book *Paper Lion*.

ANSWER: George Plimpton

[10] This author portrayed himself as an alcoholic depressive obsessed with Frank Gifford and the New York Giants in his "fictional memoir" *A Fan's Notes*.

ANSWER: Frederick Exley

7. Graphical user interfaces are almost always driven by these entities. C-sharp uses a special type of delegate to handle them. For 10 points each:

[10] Identify these entities from computer science, which can be handled with special methods like onclick and onload in JavaScript.

ANSWER: events

[10] Event handling is almost always recommended over busy waiting, which uses one of these entities to repeatedly check if a condition has been satisfied. They can be implemented in C with the keywords for and while.

ANSWER: control loops

[10] Event handling is the subject of ones of these called Observer and Publish/Subscribe, in which a notify signal is sent when an event must be handled. Singleton and Builder are other examples of them from a namesake book.

ANSWER: design patterns [prompt on partial answers]

8. Five rays from the setting sun illuminate the orange sky in the background of this painting, which was commissioned by the Countess of Thun for a Bohemian chapel. For 10 points each:

[10] Identify this work that controversially treated its subject as a landscape painting. It was the first significant work by the artist of the *Chalk Cliffs on Rugen* and *The Sea of Ice*.

ANSWER: *The* Cross in the Mountains [or the Tetschen Altarpiece]

[10] *The Cross in the Mountains* was painted by this German Romantic artist, who also painted *Wanderer Above the Sea of Clouds*.

ANSWER: Caspar David Friedrich

[10] This other German artist provided written versions of "The Juniper Tree" and "The Fisherman and His Wife" for the Grimm Fairy Tales. *Morning* is the first painting in his incomplete cycle *The Times of Day* and he also painted the titular Hulseneck children pulling a wagon.

ANSWER: Philipp Otto Runge

9. Answer the following on the awesome power of honey for 10 points each.

[10] This woman smeared honey over the mouth of her imprisoned twin brother Sigmund to save him from a she-wolf, who paused to lick the honey, allowing Sigmund to kill bite off its tongue. This occurred after this woman married Siggeir.

ANSWER: Signy

[10] This man's son Glaucus contrived to drown in a vat of honey, but was revived by Polyeidus. This king of Crete was also the father of Ariadne.

ANSWER: Minos

[10] This hero was treacherously slain by Dripcap the Herdsman, but his mother used a copper rake to gather the fragments of his corpse, then revived him with some magic honey.

ANSWER: Lemminkäinen

10. This long poem fictionalizes its author as Felix Vaughan, who courts and marries Honoria Churchill. For 10 points each:  
[10] Name this poem by Coventry Patmore, whose title came to refer to the Victorian domestic ideal for wives and mothers.  
ANSWER: "The **Angel in the House**"

[10] This author's essay "Professions for Women" implores female writers to kill the angel in the house. She attacked Arnold Bennett in her essay "Modern Fiction," which argues that "Life is not a series of gig lamps symmetrically arranged."  
ANSWER: Virginia **Woolf**

[10] This novel challenges the idea of the "angel of the house" with its character Bertha Mason, who is locked in an attic. Its title character becomes a governess and marries Edward Rochester.  
ANSWER: **Jane Eyre**

11. Heterocyclic rings containing oxygen are important functional groups in a variety of pharmaceutical compounds. Answer the following about some examples for 10 points each.

[10] This group is a cyclic ester, larger systems of which such as streptomycin are known as macrolides.  
ANSWER: **lactone**

[10] The cephalosporin antibiotic cefuroxime contains this five-membered aromatic cyclic ether. Its fully hydrogenated derivative is a common laboratory solvent.  
ANSWER: **furan**

[10] The D ring of paclitaxel is this four-membered cyclic ether. This group may be synthesized in the photochemically induced reaction of a carbonyl with an alkene known as the Paternò-Büchi reaction.  
ANSWER: **oxetane**

12. This work defines "face" as "The way in which the other presents himself, exceeding the idea of the other in me," and argues that our relationship to the "other" should parallel Descartes' relation between the *cogito* and God. For 10 points each:

[10] Identify this philosophical work, subtitled "An Essay on Exteriority."  
ANSWER: **Totality and Infinity** [or **Totalité et Infini: essai sur l'extériorité**]

[10] This Jewish philosopher authored *Totality and Infinity* as well as *Time and the Other* and *Existence and Existents*.  
ANSWER: Emmanuel **Levinas**

[10] This philosopher drew on Levinas' work to characterize the relationship between men and women as one in which man is coded as Absolute while woman is coded as the "other," in her work, *The Second Sex*.  
ANSWER: Simone de **Beauvoir**

13. By increasing the amount of oats grown, this system allowed horses to replace oxen as beasts of burden. For 10 points each:

[10] Name this system of crop rotation, adopted in medieval Europe, where some fields were intentionally allowed to lie fallow.  
ANSWER: **three field** system

[10] The mysterious "Captain Pouch" led one of many rebellions against this English practice, which eliminated common lands for peasants.  
ANSWER: **enclosure**

[10] In England, the Lord of the Manor generally appointed one of these officials, who was responsible for overseeing the peasants and serfs.  
ANSWER: **reeve**

14. For 10 points each, name these composers of variations:

[10] This composer used three folk songs, including "The Fiddler," as the basis of his *Symphonic Variations*. The title character of one of his operas sings about her love for a prince in the "Song to the Moon."  
ANSWER: Antonin **Dvorak**

[10] This composer wrote a set of monumental variations based on a waltz composed by Anton Diabelli. He also composed the *Missa Solemnis*.  
ANSWER: Ludwig van **Beethoven**

[10] This American composer used a letter written by Sam Melville before the Attica riots as the basis for his choral work *Coming Together*. He also wrote thirty-six variations on the Chilean protest song "The People United Will Never Be Defeated."  
ANSWER: Frederick **Rzewski**

15. For 10 points, name these terms you might encounter when studying ancient Greek literature.

[10] Aristotle's *Poetics* uses this term to identify the purging of emotions in the audience at the end of a tragedy. Its name is Greek for "purification" or "cleansing."

ANSWER: **catharsis**

[10] Epic poems often include this convention, in which the hero descends into the underworld. It occurs in Book 11 of the *Odyssey* and in Book 6 of the *Aeneid*.

ANSWER: **katabasis**

[10] Ancient Greek plays are chock-full of this technique, in which two characters rapidly alternate speaking single lines of verse. It's frequently used during violent arguments, such as the debate between Right Logic and Wrong Logic in Aristophanes's comedy *The Clouds*.

ANSWER: **stichomythia**

16. In March, this nation's major newspaper accused Apple Computer of luring tens of thousands of students into high interest loans and other discriminatory behavior. For 10 points each:

[10] Name this major nation that recently forced the CEO of Apple to apologize for sub-standard customer support and other allegedly unfair practices.

ANSWER: People's Republic of **China**

[10] This man recently became the new president of China, and took a high-profile trip to the United States with his equally high-profile wife.

ANSWER: **Xi** Jinping

[10] As one of his first acts as president, Xi approved the purchase of two dozen Su-35 fighter jets from this nation. This nation's other popular arms exports include the Kilo class submarine.

ANSWER: **Russia**

17. Attributes that make them useful biological model organisms include their large broods and nearly transparent eggs.

For 10 points each:

[10] These small freshwater fish are distinguishable by a pattern of blue horizontal stripes.

ANSWER: **zebrafish** [or zebra **danio**; or ***Danio*** rerio]

[10] A common research technique in *Danio* is gene knockdown utilizing these artificial RNA molecules with the namesake chemical functionality taking the place of ribose.

ANSWER: phosphorodiamidate **morpholino** oligo

[10] This acronymic technique that allows for identification of specific mutations which was introduced in *Arabidopsis* is also used in *Danio*. It relies on the creation of a DNA heteroduplex, which is cleaved by a single-strand nuclease to create fragments for analysis.

ANSWER: **TILLING** [or **Targeting Induced Local Lesions in Genomes**]



18. For 10 points each, name these thinkers who wrote about cities.

[10] This French Marxist argued that all residents of urban areas should be able to participate in city life in his book *The Right to the City*. He also wrote *The Production of Space* and inspired the New Left with his massive tome *The Critique of Everyday Life*.

ANSWER: Henri **Lefebvre**

[10] This thinker advocated mixed-use urban neighborhoods such as Greenwich Village and lambasted urban planners like Robert Moses in her classic *The Death and Life of Great American Cities*.

ANSWER: Jane **Jacobs**

[10] This one-time member of the Merry Pranksters wrote about the evolution of buildings over time in his book *How Buildings Learn*. He also published the Whole Earth Catalog and allegedly coined the phrase “information wants to be free.”

ANSWER: Stewart **Brand**

19. This man died exactly 245 years, to the day, before the birth of Elias Lonnrot. For 10 points each:

[10] Name this bishop of Turku, a great scholar who first translated the Bible into Finnish and standardized the writing of that language.

ANSWER: Michael **Agricola**

[10] Agricola was appointed bishop by this King of Sweden, who won Sweden’s independence from Denmark and later broke with the Catholic Church and adopted Lutheranism.

ANSWER: **Gustavus Vasa** [or **Gustavus I**]

[10] The patron saint of Finland is this 12th century Englishman. According to a well-known kantele poem, a violent madman named Lalli got a transgressive thrill by axe-murdering this man on a frozen lake.

ANSWER: Saint **Henry** [or Pyha **Henrik**]

20. Answer the following about the history of North Carolina for 10 points each.

[10] These early settlements along the coast of North Carolina were authorized by the Virginia Assembly, and were inhabited by Virginians who migrated south. They were formally incorporated into North Carolina in 1665.

ANSWER: **Albemarle** Settlements

[10] The Albemarle region of North Carolina was also home to this 1677 rebellion against the British Navigation Acts.

ANSWER: **Culpepper’s Rebellion**

[10] In 1765, this man became the royal governor of North Carolina. He raised taxes to build himself a mansion, which led to the Regulator War and the Battle of Alamance Creek.

ANSWER: William **Tryon**