PACE NSC 2017 - Round 22 - Tossups

1. In this decade, one government refused to offer a 21-gun salute to Henry Mayo after mistakenly seizing some US sailors. An election held in the first year of this decade was marked by the slogan "A Real Vote and No Boss Rule" and a pledge to enforce the Constitution of 1857. One document issued in this decade called for the restoration of communal *ejidos* (ay-HEE-dos) and is named for (*) Ayala. The Tampico Affair took place in this decade where the Pact of the Embassy was signed in Henry Lane Wilson's office during the Ten Tragic Days. The Plan of San Luis Potosí issued in this decade called for an uprising against Porfirio Diaz and was the beginning of the Mexican Revolution. For 10 points, name this decade in which the Zimmerman Telegram helped spark America's entry into World War I.
ANSWER: **1910**s [prompt on '**10**s] <Bentley>

2. The protagonist of a novel titled for this entity is forced to pose for visitors at the Museum of Natural Wonders and is pursued by Ridgeway. The first National Park Service site commemorating this thing was a museum opened in Cincinnati in 2004. In a 2016 Colson Whitehead novel, Cora and Caesar use a literal version of this thing. A book of its "records" was published by William (*) Still, while Eric Foner's "hidden history" of it profiled the New York Vigilance Committee. Personal Liberty Laws assisted people using this entity, who were not actually given information about it by quilts or by the song "Follow the Drinking Gourd". Many Quakers served as "conductors" on, for 10 points, what collection of informal routes used by slaves to escape to freedom?
ANSWER: the **Underground Railroad** <Bentley>

3. This English word, which is not a place name, begins the title of a painting commissioned by Girolamo Marcello in which a cupid at the feet of the title nude was painted out by a later artist. This is also the first word in the title of a painting in which a drinking vase and a mandolin sit near a woman who grasps a walking stick. In that painting titled for this action, a "wandering (*) Negress" is inspected but not devoured by a passing lion. Bat-like creatures mass behind a man performing this action in a Goya etching that suggests a certain type of it "produces monsters". Titian completed a Giorgione painting of Venus performing this action, which is also being done in an Henri Rousseau painting by a supine gypsy. For 10 points, name this nighttime action.
ANSWER: **sleep**ing [or **dream**ing] <Bentley>

4. The *sostenuto e pesante* second movement of this composer's 1926 piano sonata was written in part for the nine extra bass keys of an Imperial Bösendorfer piano. Movements 2 and 3 in a set of five piano pieces by this composer imitate a pair of out-of-tune musettes and the ribbit of an *Unka* frog. Many of this composer's slow movements include dissonant or tone-cluster ostinatos, pastoral melodies, and imitations of animal sounds, a style referred to as (*) "night music". "Snap" pizzicato is sometimes named for this composer, who learned to collect folk music with his countryman Zoltán Kodály (ZOHL-tahn KOH-dye). For 10 points, name this composer of *Out of Doors*, *Music for Strings, Percussion, and Celesta*, and *Mikrokosmos*, a 20th-century Hungarian.
ANSWER: Béla **Bartók** [or Béla Viktor János **Bartók**; or **Bartók** Béla Viktor János] <Carson>

5. An archbishop of this city who presided over and was responsible for implementing the Council of Trent was named Charles Borromeo. The Della Torre family were Guelph rulers of this city. A viceroy ruling from this city named Eugène de Beauharnais (boh-ar-NAY) founded its stock exchange in 1808. Napoleon I crowned himself King of Italy in a cathedral here. In 286 CE, Diocletian made it the capital of the Western Roman Empire. One dynasty in this city secured power after the (*) death of signore Filippo Maria Visconti by allying with Florence to secure the Peace of Lodi. A patron of Leonardo da Vinci from this city earned the nickname "The Moor" for his dark skin and was named Ludovico Sforza. For 10 points, name this capital of Lombardy, the financial capital of Italy.
ANSWER: **Milan** [or **Milano**; or **Mediolanum**] <Bentley>

6. After browsing a library containing Paracelsus and Roger Bacon, a woman in this story weeps against the cover of a journal recording how all the projects of a man's life have fallen short of their aims. A character in this story demonstrates a photographic plate, then dissolves it in a jar of acid when the image comes out blurry. Near the end of this story, a "gross, hoarse chuckle" is heard from a character described as having "indescribable (*) earthiness," the hairy servant Aminadab. A scientist in this story invents a potion to purge away a "Crimson Hand" representing "sin," inadvertently killing his wife Georgiana. For 10 points, name this story in which Aylmer tries to cure his wife of the title blemish, written by Nathaniel Hawthorne.
ANSWER: "The **Birth-Mark**" <Bollinger>

7. The Elchasaite (ell-KAZZ-uh-ite) sect reportedly engaged in a form of this practice to treat those who have been bitten by rabid dogs. First Corinthians 15:29 ("chapter 15, verse 29") has been used to justify a vicarious form of this practice. Catechumens (cat-uh-KYOO-mins) are individuals who are receiving instruction to be prepared for this practice. In the Great Commission, Jesus urged this practice to be performed in all nations. A controversial form of this practice has been used on Anne (*) Frank and other Holocaust victims by Mormons, who believe it can be used on the dead. The "believer's" form of this practice is performed for grown adults, though it is more often performed for infants. For 10 points, name this rite which John performed for Jesus, in which the participant is initiated into Christianity using water.
ANSWER: **baptism** [accept **baptism** for the dead, believer's **baptism**, credo**baptism**, infant **baptism**, or pedo**baptism**] <Cheng>

8. Minkowski's taxicab geometry created a version of this quantity named for Manhattan. In the calculus of variations, the smallest value of this quantity for distinct objects is the geodesic. A graph-theoretic notion of this quantity counts the number of edges in a shortest path between two graphs. A metric space is a set in which this notion can be quantified, and on those spaces, this notion must satisfy non-negativity, symmetry, and the (*) triangle inequality. In Euclidean geometry, this quantity for points x and y can be represented as the norm of x minus y, which can otherwise be written as the square root of the sum of squared differences between each component of two vectors a and b. For 10 points, name this quantity, the separation between two points in space.
ANSWER: **distance** [or **displacement**; or **length**; prompt on norm until "graph-theoretic" is read; accept **metric** until read] <Aggarwal>

9. An anonymous poet from this country wrote of a cat, "His whole instinct is to hunt, / Mine to free the meaning pent." A medieval tale from this country concerns a king who is cursed with madness by a bishop, then begins to levitate and lives among the trees like a bird. "Pangur Bán" is a poem from this country, whose other early literature includes a poem about Sweeney, who visits places like (*) Swim-Two-Birds. A modern poet from this country wrote of his brother being buried in "A four-foot box, a foot for every year" and concludes "Between my finger and my thumb / The squat pen rests. / I'll dig with it" in poems from his *Death of a Naturalist*. For 10 points, name this home country of Seamus Heaney and the *Book of Armagh*, which contains the *Confession* of St. Patrick.
ANSWER: **Ireland** [or **Éire**] <Kothari>

10. This quantity is plotted on log scale on the *x*-axis of a Bode plot, which measures a system's stability to changes in it. Since skin depth of electric current varies with the negative one-half power of permeability times this quantity, at high values of it, a conductor's resistance increases. In RLC circuits, when this quantity is large, the voltage across the inductor is high and across the capacitor is low. Low-pass filters screen out signals with (*) high values of it. This quantity is represented by the speed at which a phasor rotates. Fourier transforms convert a signal from the time domain to this quantity's domain. An alternating current depends on the sine of this quantity multiplied by time. For 10 points, name this quantity, which in conventional American power lines is 60 hertz.
ANSWER: angular **frequency** [or **frequency**; prompt on *f*; prompt on omega] <Silverman>

11. An overland trail named for this city was overlooked by Bent's Old Fort, a fur-trading depot managed by William Bent and his Cheyenne wife Owl Eyes. During the Civil War, H. H. Sibley was forced to withdraw from this territorial capital after a Pyrrhic victory at Glorieta Pass. While imprisoned in this city, Zebulon Pike noted the weakness of its defenses in his journal, indirectly leading to the 1846 bloodless capture of this city by Stephen (*) Kearney. Wheat shipments were transported along a railroad linking this city with Atchison and Topeka. This destination of a silver-and-furs trade route established by William Becknell was sacked after a 1680 rebellion led by Pope, the Pueblo Rebellion. For 10 points, name this city annexed to the United States in the Treaty of Guadalupe Hidalgo, the present-day capital of New Mexico.
ANSWER: **Santa Fe**, New Mexico <Bollinger>

12. Late in a play, this character reverses an insult about being called a "squashed cabbage leaf." She objects to getting into a "funny sort of copper", claiming to have known a woman who died from bathing every Saturday night, while arguing with Mrs. Pearce. This character threatens to go into business with a Hungarian named Nepommuck in a play in which an American philanthropist named Ezra Wannafeller pays her father, a (*) dustman, a huge salary to lecture on morality. She ultimately marries Freddy Hill and not the man who bets Colonel Pickering that he can train her to pass as a duchess. For 10 points, name this flower girl who is given elocution lessons by Henry Higgins in George Bernard Shaw's *Pygmalion*.
ANSWER: **Eliza** **Doolittle** [accept either underlined portion; or **Liza** Doolittle; prompt on The Flower Girl until read] <Bentley>

13. A nine-month-long performance of this activity that began at the Chalceia (chal-KAY-ah) resulted in a *peplos* for use in the Great Panathenaea (PAN-ath-uh-NAY-uh). A goddess's patronage of this activity was indicated by the epithet *Ergane* (air-GAH-nay). A character who is transformed into a nightingale after being raped by her sister's wife Tereus and having her tongue cut out conveys her plight by performing this action. The Proci are delayed in part by a daily performance of this action that is then (*) undone every night. Philomela does this to communicate with her sister Procne, and Penelope does it to create an item for Laertes. After challenging Athena to a contest in this activity, Arachne is turned into a spider. For 10 points, name this activity that can create a funeral shroud or a tapestry.
ANSWER: **weaving** [accept word forms; accept answers that specify the thing being woven, such as a robe or a funeral shroud or a tapestry] <Carson>

14. During this period, the release from prison of two sisters known as the "Crazy Prices" was demanded in exchange for *The Guitar Player*, a stolen Vermeer painting. A large number of Armalite assault rifles were smuggled to one side aboard the *QE2* during this period. The "Widgery Whitewash" exonerated perpetrators of a massacre during this period. During this period, an Apprentice Boys parade sparked the Battle of the Bogside. During this period, (*) paratroopers killed 14 unarmed protesters in Derry on January 30, 1972, an incident referred to as Bloody Sunday. The Good Friday Agreement ended this period, during which the Ulster Defense Force. For 10 points, name this period of conflict between Protestants and Catholics in Northern Ireland.
ANSWER: The **Troubles** [or Na **Trioblóidí**; prompt on the Northern Ireland conflict] <Bentley>

15. A 2015 video depicts this man firing a machine gun while encircled by camouflaged SUVs and is ostensibly a trailer for a movie called *Whoever Doesn't Understand Will Get It*. This honorary leader of a branch of the "Night Wolves" motorcycle gang engaged in a spat with John Oliver after posting a plea for help finding his lost cat to his Instagram account, which has over 2.7 million followers. This man's father, a former chief mufti of Ichkeria who was assassinated in a soccer stadium in 2004, is the namesake of his state-sponsored MMA promotion, whose facilities he showed off to Floyd Mayweather in March 2017. In April 2017, (*) *Novaya Gazeta* broke allegations that this man's government was rounding up, detaining, and torturing suspected homosexual men. For 10 points, name this current Head of the Chechen Republic.
ANSWER: Ramzan (Akhmadovich) **Kadyrov** <Carson>

16. This process is coupled to MAGE (mage) in the name of a technique used in 2011 to engineer a whole synthetic genome lacking a stop codon. The *tra* (TRAH) protein family forms a relaxosome to nick DNA during this process. Type IV (four) secretion systems are homologous to the proteins used in it. Joshua Lederberg discovered this process's mechanism, which requires either an F-positive cell or an Hfr (H-F-R) strain that has the fertility factor chromosomally integrated. This process (*) spreads R factors, which encode antibiotic resistance. During this process, a pilus forms between two bacteria, enabling horizontal gene transfer that's distinct from transduction and transformation. For 10 points, name this process often analogized to "bacterial sex".
ANSWER: bacterial **conjugation** [or word forms; prompt on horizontal gene transfer or HGT] <Silverman>

17. A character in this novel says "When you tell a lie, you steal someone's right to the truth" in arguing that every sin is a type of theft. A family friend tells its protagonist about irony after he writes a story about a man whose tears become pearls. In this novel, an official wearing black sunglasses hurls rocks at an adulterous man stuck in a chest-deep hole in a stadium. This novel closes in a San Francisco (*) park, where a silent orphan whom the main character had adopted appears to smile. This novel's protagonist frames his Hazara servant for theft after witnessing his rape by Assef. *A Thousand Splendid Suns* is a sequel to this novel, which is titled for the task Hassan performs for Amir during contests in Kabul. For 10 points, name this novel by Khaled Hosseini.
ANSWER: The ***Kite Runner*** <Brownstein>

18. In 1966, one artist working in this state published a book of photos he took of a two-and-a-half mile long section of a road in its most populous city. Ed Ruscha (roo-SHAY) photographed "every building" along a road in this state. The subject of a photograph taken in this state told the artist that she "had been living on frozen vegetables from the surrounding fields, and birds that the children killed". The official title of a photograph of (*) Florence Owens Thompson refers to "Human Erosion" in this state. The moon appears over the title rock face in a photograph of a National Park in this state. Dorothea Lange's photograph *Migrant Mother* was taken in this state. For 10 points, name this state where Ansel Adam's *Moon and Half Dome* was taken in Yosemite.
ANSWER: **California** <Bentley>

19. The process of "spiritualization" that constitutes this philosopher's theory of memory resembles that of an earlier philosopher but rejects that philosopher's notion of the *wahm* (WAH-hmm), or estimative faculty. This philosopher asserted that God is simple and changeless but can create complex plurality by contemplating all of reality simultaneously. Intellectual heirs of this philosopher argued that there are both religious and philosophical kinds of truth, a doctrine known as "double truth." This philosopher revived the study of (*) Aristotle through his series of commentaries, which sought to refute contemporary Neoplatonist accounts propounded by fellow Muslim thinkers. For 10 points, name this 12th-century Islamic philosopher who wrote *The Incoherence of the Incoherence*.
ANSWER: **Averroes** [or Abu al-Walid Muhammad ibn Ahmad **ibn Rushd**] <Aggarwal>

20. Normal modes that transform as a quadratic function of position will change this quantity. It's not volume, but this quantity squared, over radius to the sixth, times the harmonic mean of ionization energy, equals the long-range interaction energy in an ideal gas. This quantity must change for a vibration to be observed in Raman spectroscopy. In Pearson's theory, soft acids and bases have high values for this quantity, which is higher for iodide than for fluoride. **(*)** London dispersion forces scale with this property, which is roughly proportional to molecular surface area. This quantity is the ratio of induced dipole moment to the external electric field. For 10 points, name this quantity symbolized alpha, which measures how easy it is to distort an electron cloud.

ANSWER: electric **polarizability** [or word forms; or **alpha** until it is read; prompt on molecular <u>size</u> or <u>volume</u> or similar answers] <Silverman>

21. A gallery in this building contains a set of eight gilded Caen stone statues by John Birnie Philip and a pair of faded frescoes by Daniel Maclise. A set of frescoes depicting virtues made by William Dyce hang in this building's "Robing Room". A man whose title is often shortened to "Black Rod" is responsible for maintaining this building, which was designed by Charles Barry and Augustus Pugin. Four bells in this building play a chime melody **(*)** named for it that gets longer every quarter hour. Its predecessor is on fire in a J. M. W. Turner painting which shows it to the left of Waterloo Bridge. Its Elizabeth Tower features a four-faced clock and the bell Big Ben. For 10 points, name this complex facing the River Thames that contains meeting rooms for the Lords and the Commons.

ANSWER: **Houses of Parliament** [or the **Palace of Westminster**; prompt on <u>Westminster</u>] <Jose>

1. Answer the following about Amphitryon's (am-FIT-tree-on's) adventures after his exile from Tiryns (TEER-inz), for 10 points each.
[10] Amphitryon was purged of the blood guilt from having accidentally killed his uncle Electryon by this king of Thebes, who later ordered his niece Antigone's death after she disobeyed his order and buried her brother Polynices (poly-NYE-seez).
ANSWER: **Creon**
[10] Creon then assigned Amphitryon to catch this legendarily uncatchable beast. Amphitryon solved the problem by sending Laelaps (LAY-laps), a dog who never failed to catch its prey, after this beast, upon which Zeus resolved the paradox by turning both animals to stone.
ANSWER: **Teumessian fox** (too-MESS-ee-an) [or **Cadmean fox**; accept **vixen** for "fox"; prompt on fox or vixen]
[10] Amphitryon's wife Alcmene (alk-MEE-nee) gave birth to twin sons: one, Iphicles (IF-ih-kleez), was actually Amphitryon's, while the other was this hero, a child of Zeus who was later assigned twelve labors.
ANSWER: **Heracles** [or **Hercules**; accept **Alcaeus** or **Alcides**] <Carson>

2. There's more than one way to write an equilibrium constant. For 10 points each:
[10] The law of mass action equates the equilibrium constant to a ratio of component concentrations assessed by this metric. This common metric for concentration equals moles of solute over liters of the solution.
ANSWER: **molarity** [or **molar** concentration; do not accept or prompt on "molality" or "molal" concentration]
[10] Technically, to keep units consistent, concentration should be replaced by this value, a dimensionless effective concentration symbolized lowercase a. Its namesake coefficient gamma measures intermolecular attractions in a liquid.
ANSWER: **activity** [or **activity** coefficient]
[10] Transition state theory relies heavily on a prediction from the grand canonical ensemble that this quantity for each molecule can be substituted instead of molarity. In TST, it is usually symbolized Q and comes in translational, rotational, vibrational, and electronic components.
ANSWER: molecular **partition function** <Silverman>

3. This man's Christian faith was shaped by his grandmother, Ludmila, in opposition to his pagan mother, Dragomir. For 10 points each:
[10] Identify this Duke of Bohemia who was killed after his brother Boleslaus lured him to a church dedication ceremony.
ANSWER: **Wenceslas** I [or Good King **Wenceslas**]
[10] Wenceslas's body resides in a shrine in Saint Vitus's Cathedral in this Bohemian city. One of the causes of the Thirty Years' War was its namesake 1618 Defenestration, in which Catholic officials were thrown out a window.
ANSWER: **Prague** [or **Praha**]
[10] Wenceslas resumed the tribute paid to Henry the Fowler, the father of this Holy Roman Emperor who won the Battle of Lechfeld.
ANSWER: **Otto I** [or **Otto the Great**; prompt on Otto] <Bentley>

4. Answer the following about things done by Edwin Arlington Robinson characters, for 10 points each.
[10] Despite the fact that he "glittered when he walked" and was "richer than a king", Richard Cory ends the poem titled for him by committing suicide in this specific manner. A description is acceptable.
ANSWER: he **shoot**s himself in the head [accept synonyms; accept "went home and **put a bullet through his head**"]
[10] "Miniver Cheevy" ends by noting that the title character "coughed, and called it fate, and kept on" performing this action. A man named Eben climbs to the top of a hill to do this, specifically proposing to himself that he do it "to the bird", in "Mr. Flood's Party".
ANSWER: **drink**ing [accept additional information like "**drink**ing alcohol" or "**drink**ing from a jug"]
[10] The title character of "Luke Havergal" is repeatedly told to "go to" this specific place, where "the vines cling crimson on the wall", because "there is not a dawn in eastern skies" sufficient for him.
ANSWER: the **western gate** [prompt on partial answer] <Carson>

5. This artist's painting *Excavation* was inspired by the 1949 Giuseppe De Santis film *Bitter Rice*. For 10 points each:
[10] Name this artist who made black and white paintings such as *Zurich* in the late 1940s because he was too poor to buy pigments. This husband of the artist Elaine Fried painted *Clam Diggers*.
ANSWER: Willem **de Kooning** [or Bill **de Kooning**]
[10] De Kooning created a series of six paintings of these type of people. Another de Kooning painting pairs one of these people with a bicycle.
ANSWER: **women** [or **woman**]
[10] In the 1980s, this artist created his own Pop Art versions of de Kooning's *Woman* paintings. Earlier, this man elevated the aesthetics of comic strips to high art in paintings such as *Whaam!*
ANSWER: Roy **Lichtenstein** <Bentley>

6. Answer the following about depictions of the Cultural Revolution in Chinese literature, for 10 points each.
[10] Two boys sent to a mountain village for re-education feature in Dai Sijie's (DYE suh-jee-EH's) novel titled for this author and the "Little Chinese Seamstress." This author's characters include the criminal Vautrin (voh-TRAN) and the social climber Eugène de Rastignac (uh-ZHEN de rah-steen-yahk).
ANSWER: Honoré de **Balzac**
[10] Old Geng (gung) thwarts attempts to destroy his fox-fairy tablet during the revolution in a Mo Yan novel titled for this color of sorghum. During the revolution, a book of this color by Mao was disseminated by guards named for it.
ANSWER: **red** [or **hong**; accept *Red Sorghum* Clan or The *Little Red Book* or **Red Guards**]
[10] The employees of the hospital where Manna works bicker over the Cultural Revolution in this novel by Ha Jin, in which Lin Kong does the title action for eighteen years while trying to get a divorce from his wife Shuyu.
ANSWER: *Waiting* <Brownstein>

7. This person's childhood home of Locust Hill was not far from Monticello, and he briefly served in the Chosen Rifle Company of a future colleague. For 10 points each:
[10] Name this leader of the Corps of Discovery.
ANSWER: Meriwether **Lewis**
[10] This member of the Lemhi Shoshone tribe joined the Lewis and Clark Expedition with her husband, Toussaint Charbonneau. Her knowledge of sign language helped her secure horses for the expedition.
ANSWER: **Sacagawea** [or **Sagagawea** or **Sakakawea**]
[10] Some accounts hold that Sacagawea lived well past 1812, dying in this modern-day state. The construction of forts such as Fort Phil Kearny in this modern-day state increased white settlement in it.
ANSWER: **Wyoming** <Bentley>

8. In 1959, the Hebgen Lake Earthquake occurred in this state, which created the six-mile long Quake Lake by depositing rocks that impeded the Madison River's flow. For 10 points each:
[10] Name this large U.S. state whose two flagship universities have campuses in Missoula, Bozeman, Billings, and Helena.
ANSWER: **Montana**
[10] Going-to-the-Sun Road passes through this Montana attraction, which lies directly across the U.S.-Canada border from Waterton Lakes National Park. This park, which is west of the Blackfeet Indian Reservation, contains the "Crown of the Continent" ecosystem.
ANSWER: **Glacier** National Park
[10] Brower's Spring, which is thought to be the source of the Missouri River, is located in the Centennial Mountains, which is the southernmost sub-range of this mountain range that runs along the Montana-Idaho border and is itself a sub-range of the Rockies.
ANSWER: **Bitterroot** Range [accept **Bitterroot** Mountains] <Carson>

9. Prior to the 12th century, more powerful members of this class of people were called bushi. For 10 points each:

[10] Identify this class of people, whose wives were often trained to use a kaiken knife. A group of these people launched a failed 1877 rebellion after modernization largely made them obsolete.

ANSWER: **samurai**

[10] Commoners were allowed to carry one of these weapons, but only samurai were permitted to wield two of them. Samurai often carried two of them, the *wakizashi* and the *katana*.

ANSWER: **sword**s

[10] Samurai often maintained these things, known in Japanese as *kare-sansui* or *ishi-niwa*. Kyōtō's Ryōan-ji contains a celebrated example of one of these things.

ANSWER: **rock garden**s [or **zen garden**s; prompt on gardens] <Bentley>

10. A common method of determining the optical density of a cell culture involves measuring this quantity. For 10 points each:

[10] Name this quantity that is measured by placing a layer of liquid between two pieces of glass and multiplying the sine of the critical angle at which light still transmits by 1.5, which is approximately glass's value for it.

ANSWER: **index of refraction** [or **refractive index**; or $\underline{\boldsymbol{n}}$]

[10] The index of refraction equals the speed of light over this quantity for light in the liquid. Unlike a related value, this specific quantity is defined as just the wavenumber over the angular frequency.

ANSWER: **phase velocity** [prompt on velocity; prompt on speed of light]

[10] If the angular frequency is independent of wavenumber, then the namesake relation for this process is that the group and phase velocities are equal. This process is the spreading of a ray of light into a rainbow when it passes through a prism.

ANSWER: **dispersion** [or **dispersion** relation] <Silverman>

11. In a play by this author, Edith is unable to see or hear the ghost of Elvira, her husband Charles's ex-wife. For 10 points each:

[10] Name this British playwright of *Blithe Spirit* who also wrote a comedy in which the newlyweds Sibyl and Elyot check into the same hotel as their ex-spouses, *Private Lives*.

ANSWER: Noel **Coward** [or Sir Noel Pierce **Coward**]

[10] In his 1946 play *Peace in Our Time*, Coward imagined a world where this government had taken over the United Kingdom. At the end of Lillian Hellman's *Watch on the Rhine*, Kurt leaves the country to continue to agitate against this government.

ANSWER: **Nazi** Germany [or the **Third Reich**; prompt on Germany]

[10] Coward plays such as *Design for Living* and *Hay Fever* are 20th-century examples of the comedy of these things. J. A. Cuddon defined this genre of comedy as addressing "the behavior and deportment of men and women living under specific social codes".

ANSWER: comedy of **manners** <Bentley>

12. According to the "swipe-card" model, this sense is actually based on the vibrational frequency of ligand binding, not the ligand's shape, so it could actually distinguish deuterated ligands. For 10 points each:
[10] Name this sense that is regulated by the olfactory nerve.
ANSWER: sense of **smell** [or word forms; or **scent**; or word forms; prompt on olfaction]
[10] If true, the swipe-card model would invalidate the more canonical mechanism for how these proteins work. Olfactory receptors and rhodopsin fall into this class of proteins which all have seven transmembrane helices and can act as guanine exchange factors.
ANSWER: **G-protein coupled receptor**s [or **GPCR**s; do not accept or prompt on "G proteins"; prompt on membrane proteins; prompt on receptors]
[10] Upon sensing an odor, receptor neurons in the olfactory mucosa pass the signal to a globular structure of this name in the olfactory bulb. More commonly, this term refers to the bundle of capillaries surrounded by Bowman's capsule.
ANSWER: **glomerulus** [or **glomerular** layer] <Silverman>

13. Answer the following about Joseph Haydn's masses, for 10 points each.
[10] Haydn's penultimate setting of the mass shocked Maria Theresa because it reused music from a duet between Adam and Eve in this Haydn oratorio, which opens with "The Representation of Chaos" and depicts events from the Book of Genesis.
ANSWER: *The **Creation*** [or *Die **Schöpfung***; accept ***Schöpfungsmesse***]
[10] Haydn's *Mass in Time of War* is alternately known as the "Paukenmesse" (POW-ken-mess-uh) due to its ominous solo for this instrument in the *Agnus Dei*. Two sets of these instruments play dueling glissandi in the final movement of Carl Nielsen's *Inextinguishable Symphony*.
ANSWER: **timpani** [or **kettledrum**; prompt on drum]
[10] This 1798 mass is scored for no woodwinds, owing to Nikolaus II Esterházy having recently dismissed his wind band. It gained both its official title and its common nickname from contemporary events in the Napoleonic wars.
ANSWER: ***Missa in Angustiis*** [or *Lord **Nelson Mass***; accept ***Mass for Troubled Times***] <Carson>

14. Answer the following about the Parnassian literary movement, for 10 points each.
[10] The Parnassians were inspired by this 19th-century literary credo, advanced most prominently by Théophile Gautier (tay-oh-FEEL goat-YAY). It suggests that literature, among other things, needs no source of merit other than its own intrinsic value.
ANSWER: **art for art's sake** [or l'**art pour l'art**]
[10] This Parnassian poet, who wrote "The Broken Vase" and *Revolt of the Flowers*, won the first-ever Nobel Prize in Literature in 1901.
ANSWER: Sully **Prudhomme** (sue-LEE proo-DUM) [or René François Armand **Prudhomme**]
[10] Many prominent Parnassians later became Symbolists, including this poet of "A Throw of the Dice Will Never Abolish Chance" and "The Afternoon of A Faun", the latter of which inspired a Debussy piece.
ANSWER: Stéphane **Mallarmé** [or Étienne **Mallarmé**] <Carson>

15. The second edition of this man's most famous theological work included several chapters addressing Arthur Drews's then-recently released book *The Christ Myth*. For 10 points each:
[10] Name this author of *The Quest of the Historical Jesus*, who won a Nobel Peace Prize for his medical missionary work founding a namesake hospital in what is now Gabon.
ANSWER: Albert **Schweitzer**
[10] In another theological text, Schweitzer claimed that this figure's "mysticism" was centered on the idea of "being-in-Christ". Fourteen of the 27 books in the New Testament are credited to this apostle, who experienced a conversion on the road to Damascus.
ANSWER: **Paul** the Apostle [or Saint **Paul**; accept **Saul** of Tarsus]
[10] Paul claims that Christ's coming redeemed Christians from the "curse" or "schoolmaster" of Mosaic law, making circumcision unnecessary, in this epistle addressed to a group of Anatolian churches.
ANSWER: Epistle to the **Galatians** <Carson>

16. At the beginning of this movie, the title character wanders into a town where a dog carrying a human hand gleefully prances toward him. For 10 points each:
[10] Name this film in which a wandering samurai plays off Tazaemon and Takaemon (tah-zah-eh-moan and tah-kah-eh-moan), two rival merchants, by having them both hire him as a bodyguard.
ANSWER: *Yojimbo* [or *Yōjinbo*]
[10] *Yojimbo* and its sequel *Sanjuro* are films by this Japanese director, whose other collaborations with star Toshirō Mifune include *Throne of Blood* and *The Seven Samurai*.
ANSWER: Akira **Kurosawa** [accept names in either order]
[10] This director of *The Good, The Bad, and The Ugly* remade *Yojimbo* as the spaghetti western *A Fistful of Dollars*, after which he was successfully sued by the distributors of *Yojimbo* for copyright infringement.
ANSWER: Sergio **Leone** <Jose>

17. The so-called "warm" theory of this process posits that the era of radiation took place alongside this process to resolve the "graceful exit problem." For 10 points each:
[10] Name this process proposed by Alan Guth (gooth), in which the space between particles of the universe increased at a rate that was faster than the speed of light.
ANSWER: cosmic **inflation** [accept warm **inflation**]
[10] Cosmic inflation is theorized to have occurred less than a microsecond after this event, in which the universe was born from a singularity. Fred Hoyle coined the two-word name for this event.
ANSWER: **Big Bang**
[10] The Big Bang theory is an alternative to this theory of the universe's origin, which holds that matter is continuously added to it. Hoyle later proposed a "quasi-" form of this theory suggesting that the universe evolves through "mini-bangs."
ANSWER: **steady-state** theory <Jose>

18. This practice was eventually banned by the Canadian government, in part since it was often used to deny rival chieftains the ability to access necessary goods. For 10 points each:
[10] Name this gift-giving ceremony practiced by the Tlingit (KLING-it), Haida (HIGH-dah), and Kwakiutl tribes of Northwest North America. It was observed and described in the anthropology book *The Mind of Primitive Man*.
ANSWER: **potlatch**
[10] This teacher of Ruth Benedict and Zora Neale Hurston and author of *The Mind of Primitive Man* is also known as the "father of anthropology."
ANSWER: Franz Uri **Boas**
[10] In his book *The Gift*, Marcel Mauss (mouse) argued that the potlatch is this type of institution, in which exchange occurs independent of economic and social factors. In this type of interaction, gift-giving appears to be voluntary, but is in fact obligatory.
ANSWER: **total prestation** [prompt on prestation] <Jose>

19. Answer the following about the ancient Athenian philosopher Cratylus, for 10 points each:
[10] In the Platonic dialogue *Cratylus*, Cratylus and Hermogenes contend, respectively, that these things are either purely natural or purely conventional. The Confucian doctrine of *zhengming* (jung-meeng) is often translated to English as the "rectification" of these things.
ANSWER: **name**s [or **term**s or similar answers; prompt on words or languages]
[10] In response to Cratylus's contention that studying names is the best way to understand what they designate, Socrates invokes the theory of these abstract, eternal entities, of which empirical things are just copies.
ANSWER: Platonic **Form**s [or Platonic **Idea**s]
[10] Aristotle reported that Cratylus eventually became such a radical follower of this pre-Socratic philosopher that he extended one of this man's aphorisms to claim that one cannot step into a river even once.
ANSWER: **Heraclitus** of Ephesus <Kothari>

20. This monarch took the simple coat and hat worn by the Chevalier de Coigny (shuh-vall-YAY de kwann-YEE) during an escape attempt during which he would later disguise himself as a valet. For 10 points each:
[10] Identify this French monarch who failed in his Flight to Varennes (vah-REN). As a result, he was re-captured and ultimately beheaded during the French Revolution.
ANSWER: **Louis XVI** [prompt on Louis]
[10] Louis XVI was discovered by a postmaster named Jean-Baptiste Drouet (droo-AY), who used one of these items to confirm the king's identity. The *assignat* (ah-seen-YAH) was one of these things used during the French Revolution.
ANSWER: paper **currency** [or **money** or **coin**]
[10] Following the Flight to Varennes, Louis and his family were returned to this building, where they were imprisoned. On the 10th of August, 1792, this building was stormed and many Swiss Guards were killed.
ANSWER: **Tuileries** (tweel-REE) Palace <Bentley>

21. *Deinococcus radiodurans* has been engineered to reduce this element in wastewater treatment plants and at nuclear dump sites. For 10 points each:

[10] Name this element, whose methyl- and dimethyl- compounds are the principal contributors to the bio·magnification effect, in which this toxic element concentrates in the upper levels of a food chain.

ANSWER: **mercury** [or **Hg**]

[10] Bacterial bioremediation was coupled with generous helpings of the dispersant chemical Corexit in the aftermath of this 2010 event, which caused the death of hundreds of dolphins and pelicans in the Gulf of Mexico.

ANSWER: 2010 **Deepwater Horizon** oil spill [or the **BP oil spill**; or the **British Petroleum oil spill**; or obvious equivalents]

[10] Many current bioremediation schemes focus on this bacterial genus, whose species *putida* (pyoo-TEE-dah) was the first organism to be patented since it degrades petroleum. The *aeruginosa* (ah-ROO-jin-oh-suh) species in this genus is an antibiotic-resistant pathogen.

ANSWER: ***Pseudomonas*** [or ***Pseudomonas putida***; or ***Pseudomonas aeruginosa***] <Silverman>