





### PACE NSC 2017 - Round 07 - Tossups

1. AT&T executive Frederick Kappel reformed this organization after its public failure in Chicago during Christmas in 1966. The 1792 act that created this organization heavily subsidized the newspaper industry. William Taft signed a law allowing it to operate savings banks. This organization largely didn't challenge the violation of its "foot and horse" monopoly by Henry Wells's company in Gold Rush California. It started more heavily (\*) censoring material following passage of the Comstock Law. It was made into a corporation under Richard Nixon, and its head is no longer in the Cabinet. The mascot Mr. Zip helped it promulgate a five digit system for faster sorting. For 10 points, name this organization that offers rural free delivery and handles first class mail.

ANSWER: US Postal Service [or USPS] <Bentley>

2. The second movement of this composition opens with a solo horn introducing an ascending long C, D, E-flat, long F motif. The same melodic phrase is repeated twelve times in a row as various instruments simultaneously play in 6/8, 3/4, and 2/4 time in its second movement, which also scores different instruments in B-flat major, A major, and C major. Its first movement features an ostinato consisting of triplet eighth notes, two quarter notes, (\*) two eighth notes, and a quarter note, while its final movement has a "fade-out" ending produced by closing the door leading to the offstage women's choruses. Those movements of this suite are both in 5/4 and are subtitled "the Mystic" and "Bringer of War". For 10 points, name this Gustav Holst suite including movements titled "Neptune" and "Mars".

ANSWER: *The Planets* [accept Gustav Holst's Opus 32; "Holst" is not needed after it is read] <Carson>

3. In response to this event, Richard Price delivered a sermon called *A Discourse on the Love of our Country*, which ignited a pamphlet war about this event. In a book written in this event's aftermath, William Godwin introduced his "famous fire cause." Mary Wollstonecraft denounced marriages of convenience and redefined "sublime" and "beautiful" in her *Vindication of the Rights of Men*, which was written in response to a tract about this event. Thomas Paine was sentenced *in absentia* to hanging for seditious libel for a pamphlet about this event, (\*) *The Rights of Man*, which was written in response to "Reflections" by Edmund Burke opposing this event's radicalism. For 10 points, name this event whose participants wrote the "Declaration of the Rights of Man and Citizen."

ANSWER: French Revolution [or clear equivalents; accept 100th anniversary of the Glorious Revolution until "pamphlet war"] <Kothari>

**4. A component of these structures is labelled as either simple, capitate, or trifid based on its shape. These structures are formed in AP3 mutants but not *AGAMOUS* mutants of *Arabidopsis*, since they form only when C genes are expressed in the ABC model. RNAses (R-N-azes) called S glycoproteins inside these structures regulate self-incompatibility by preventing tube elongation. Eight fused haploid cells without an arche-gonium form inside this structure's mega-sporangium in (\*) angiosperms. These structures are found in the fourth and innermost whorl of a flower. They are composed of an ovary, a style, and a sticky distal face called the stigma, which catches pollen grains released by stamens. For 10 points, name this component of the gynoecium, the female sex organ of a flower.**

ANSWER: carpels [or pistils; or gynoecium until it is read; or stigma until it is read; prompt on flowers]  
<Silverman>

**5. This novel's narrator ascribes happy accidents, such as a payphone refunding all his coins at the end of a difficult call, to a cosmic force he calls "McFate." One of its characters delivers a death sentence parodying Eliot's poem "Ash Wednesday" that begins "Because you took advantage of a sinner", before killing a pornographic film director at the Duk Duk Ranch. This novel is framed as a "Confession of a (\*) White Widowed Male," edited by the psychologist John Ray. In this novel, the Enchanted Hunters hotel, which is where its title character first seduces the narrator, coincidentally bears the inverted name of the Clare Quilty-written play she stars in. For 10 points, name this novel about the nymphet-obsessed Humbert Humbert, written by Vladimir Nabokov.**

ANSWER: Lolita <Gupta>

**6. In an eruption of violence against this group, mobs barbecued the slum residents of Block 32 with state-supplied kerosene. Repressive efforts like Operation Woodrose radicalized members of this group who blew up a Boeing 747 flying from Montreal in the deadliest airplane hijacking prior to 9/11. The quote "When a great tree falls, the earth shakes" was used to dismiss a wave of pogroms against this group. In 1984, Jarnail Bhindranwale (jur-NEL bin-drawn-VAH-lay) led militants from this group's (\*) Khalistan movement in a protest blown up by tank shells in Operation Bluestar; afterward, two bodyguards from this group killed Indira Gandhi. For 10 points, name this religious minority in the Punjab that Hindu mobs identified by their turbans and uncut hair.**

ANSWER: Indian Sikhs <Bollinger>

**7. Hosohedra (HOSE-oh-HEE-dra) are tessellations of these objects by lunes. Extending Girard's theorem to polygons named after these figures can be used to prove Euler's Formula. In three dimensions, the maximum number of these figures that can touch each other without intersection is the kissing number. The complex plane together with a point at (\*) infinity is often modeled as one of these figures named for Riemann. A stereographic projection maps these figures onto a plane. The Kepler problem concerns the densest packing of these figures. Azimuthal and polar angles appear in a coordinate system named for these objects, and great circles contain these objects' diameters. A ball is the interior of, for 10 points, what round three-dimensional figures with volume "four-thirds pi r-cubed"?**

ANSWER: sphere [or 2-spheres; accept spherical coordinates; prompt on balls until read; do not accept or prompt on "circles"] <Aggarwal>

8. A character in this book describes "the old, old problem" of deciding between "celibacy, matrimony, or unchastity" before declaring "hear me, ambitious souls, sex is the curse of life!" Another of its characters is a dentist who declares "a moral truth is a hollow tooth / which must be propped with gold". Its final section, which opens with an interrupted checkers game after which Beelzebub meets with Loki and Yogarindra, follows a fragmentary mock-epic credited to (\*) Jonathan Swift Somers. The first poem in this collection notes that "Old Fiddler Jones" now babbles about "what Abe Lincoln said / one time at Springfield", as he, like "Elmer, Herman, Bert, Tom and Charley", are "sleeping on the hill". For 10 points, name this book by Edgar Lee Masters.

ANSWER: Spoon River Anthology <Carson>

9. This painting is the subject of Michael Jacobs's book *Everything is Happening*. After the death of Jaime Sabartés (HIGH-may sah-bar-TAYCE), an artist donated his 45 variations on this painting to his namesake museum in 1968; many of those variations feature a menacing ceiling hook. In this painting, "the observer and the observed take part in a ceaseless exchange", according to Michel (\*) Foucault's *The Order of Things*. A youth places her red-laced shoe onto a dog's back on the right side of this painting. The shade cast on the two large Rubens paintings in this painting's background contrasts with the artist, who wears a red cross and stands at an easel. A dwarf is part of the entourage of the Infanta Margarita Teresa as depicted in, for 10 points, which painting by Diego Velazquez?

ANSWER: *Las Meninas* [accept *The Maids of Honor* or *The Ladies-in-Waiting*] <Bentley>

10. In the Qur'an, a man named Samiri made this object by collecting a handful of dust from the footsteps of Gabriel. In First Kings, Jeroboam made two versions of this object out of fear that his people would kill him and return to Rehoboam, the king of Judah. This object was burnt, ground down into powder, and scattered on water, which the people of Israel drank. This object prompted a man to order the sons of Levi to kill 3,000 men, after having thrown two (\*) tablets out of his hands. This object prompted people to say, "These are your gods, O Israel, who brought you up out of the land of Egypt!" Many people remove their earrings to create this object. For 10 points, name this idol that Aaron created during Moses's absence.

ANSWER: the golden calf [or golden calves; prompt on idols, images, statues, or similar answers] <Cheng>

11. The source material for this opera also served as the basis for Stanislao Gastaldon's *Mala Pasqua!*. A character in this opera asks "why did you make the sign of silence?" after a scene in which a church chorus sings the *Regina Coeli* (ray-JEE-nah CHEL-ee) while a group of villagers sing an Easter hymn. The opening credits of *Raging Bull* are set to this opera's intermezzo. A party in this opera that begins with a character singing "Hail to the bubbling wine" ends with that character (\*) biting his rival's ear. In this opera's aria "Voi lo sapete", Lucia learns of her son's adultery from Santuzza. Often considered the first *verismo* opera, it is regularly performed on a double bill with Leoncavallo's *Pagliacci*. An offstage duel between Alfio and Turiddu ends, for 10 points, which opera by Pietro Mascagni?

ANSWER: Cavalleria rusticana [accept Rustic Chivalry] <Carson>

**12. Roger Tsien (tsee-EN) designed a GFP variant called Cameleon that senses this element. Parvalbumin and other proteins that bind this element have a motif that looks like a hand. In humans, mineralization refers to the binding of this element to phosphates. When this element binds troponin, it opens up spots for myosin to form crossbridges. Protein kinase C signaling is activated by this (\*) secondary messenger, which accumulates in the sarcoplasmic reticulum in cells. Influx of this element at a synapse stimulates acetylcholine release and muscle contraction. All forms of vitamin D are named for this element, levels of which are controlled in the body by parathyroid hormone to activate osteoblasts and osteoclasts. For 10 points, name this metal required for bone formation.**

ANSWER: calcium [or Ca<sup>2+</sup>] <Silverman>

**13. In this modern-day country, eight thousand British-Indian troops surrendered to an Ottoman siege in April 1916. A pact named for this country's capital made the UK a party to CENTO. A war fought in this country was investigated in the Chilcot report. Alastair Campbell altered the September Dossier about this country, which, like the later "Dodgy Dossier," was used to justify (\*) British participation in a war in this country. During World War II, the British ousted Rashid Ali and reinstalled the last king of this country, Faisal II. British troops participated in Operation Enduring Freedom in this country. For 10 points, name this country where British troops under Tony Blair's government supported a 2003 invasion to overthrow Saddam Hussein.**

ANSWER: Iraq [or Republic of Iraq] <Bentley>

**14. Herbie Hancock played the piano on a "rhapsody" named after this character, which appears on an album named for him by Chick Corea. Mafia hitman Albert Anastasia was nicknamed for both the Lord High Executioner and for this character, who was likely inspired by the furniture dealer Theophilus Carter. Erethism is a symptom of a disease named for this character that frequently afflicted people working in (\*) Danbury, Connecticut. He says "up above the world you fly, / Like a tea tray in the sky" while reciting "Twinkle, Twinkle, Little Bat" and poses the riddle "why is a raven like a writing desk?" Mercury poisoning likely caused the phenomenon referenced by this character's name. For 10 points, name this character who constantly switches places at a tea party in *Alice in Wonderland*.**

ANSWER: The Mad Hatter [or The Hatter] <Jose>

**15. According to Euripides, this character was imprisoned in "the grove of Demeter and the city of Hermione". The aconite plant arose from this character's saliva falling on rocky ground. Hesiod, the first extant source to give this figure a name, describes him as "brazen-voiced". A hero entered a cave at Tainaron to begin a quest centering on this figure that ended with the third and final instance in which Eurystheus (\*) hid in a jar in fear. While searching for this being, that hero failed to save Pirithous but rescued Theseus. While accompanying Aeneas on his *katabasis*, the Cumaean Sibyl used a drugged cake to subdue this being. This snake-covered, serpent-tailed being was the target of Heracles's last labor. For 10 points, name this guardian of the gates of Hades, a three-headed dog.**

ANSWER: Cerberus [or Kerberos] <Carson>

16. A theatrical director named Felix stars in Margaret Atwood's 2016 adaptation of this play, *Hag-Seed*. A speech in this play that asserts "all things in common nature should produce / without sweat or endeavor" was mostly ripped off from Montaigne's essay "Of Cannibals". A character in this play vows to "break my staff" and "drown my book" before dismissing a wedding masque, noting "the great globe itself... shall dissolve" because (\*) "we are such stuff / as dreams are made on". Its ending features the resignation of the usurping Duke of Milan and the revelation of Ferdinand and his new wife, who is surprised to see a "brave new world / that has such people in 't!" For 10 points, name this Shakespeare play featuring Miranda, Ariel, and Prospero, who causes a shipwreck by summoning the title storm.

ANSWER: *The Tempest* <Carson>

17. This quantity is constant in the canonical ensemble, but it varies in the microcanonical ensemble. The maximum value for a coefficient of performance is a simple ratio in this intensive quantity. The reciprocal of this quantity, which is symbolized beta, appears in the exponential of a Boltzmann factor. The energy contributed by each degree of freedom depends only on this quantity. Carnot (car-NOH) efficiency is one minus the (\*) ratio of this quantity for the two reservoirs. The entropy change equals the integral of reversible heat over this quantity. The two containers sorted by Maxwell's demon have different values for this quantity, which scales with average molecular speed. For 10 points, name this quantity measured on an absolute scale by Rankines or kelvins.

ANSWER: absolute temperature [or T] <Silverman>

18. A "poor chap" who "always loved larking" suffers this fate in a Stevie Smith poem that notes "I was much too far out all my life". During a trip to Italy, Gwendolen Harleth's hesitation allows this fate to befall Henleigh Grandcourt in *Daniel Deronda*. Diggory Venn arrives in time to prevent Clym Yeobright from suffering this fate at the end of *The Return of the Native*, though Damon Wildeve and Eustacia Vye both fall victim to it. Shortly after they reconcile at the end of *The (\*) Mill on the Floss*, both Tom and Maggie Tulliver suffer this fate. Shortly after listing the symbolic meanings of various types of flowers, a Shakespearean character suffers this fate after falling out of a willow tree. For 10 points, identify the method of death experienced by Ophelia from *Hamlet*.

ANSWER: drowning [prompt on suicide or death] <Carson>

19. An early example of these texts foreshadowed many later ones in its explication of the claim that their speaker's "persona will never be that of a wallflower". A man forced to wear a T-shirt due to a thumb operation "looked disgusting" due to his "nipples protruding", according to another of them. Several no-longer-extant examples of these texts referred to a man as a "leightweight chocker" (late-wait CHOCK-er), while others coined the phrase (\*) "fired like a dog". FiveThirtyEight found that over half of these texts feature at least one exclamation mark, including one that features a picture of their author eating a taco bowl and the line "I love Hispanics!". A more recent one lamented "constant negative press covfefe" (COVE-fuh-fuh). For 10 points, name these 140-character-or-less missives posted by the President.

ANSWER: tweets by Donald (John) Trump [or tweets from @realDonaldTrump; prompt on tweets; prompt on statements made by Donald Trump] [The first mentioned tweet claims that Trump would rather "build walls than cling to them".] <Jose>

**20. The holder of this office was the highest superior of treasurers known as defterdars, and this person's mother was called the *valide* (VAH-lee-deh). The males closest to the person in this office were members of the Inside Service, a group headed by a General of the Gate who was a eunuch. This person ruled over a government known as the Sublime Porte. This person often consulted with a council of state called a (\*) divan (dih-VAN). Some holders of this office had a palace at Edirne (ay-DEER-nay) home to the concubines that constituted their harem. These people received the Sword of Osman during their coronation. Many administrative duties were handled by a subordinate to the holder of this office called the grand vizier. For 10 points, name this head of the empire that conquered Constantinople.**

ANSWER: **Ottoman sultan** [or **Ottoman emperor**; or **Caesar of Rum**; prompt on sultan; prompt on emperor]  
<Bentley>

**21. A character in this play boasts that he "got the power of death" after murdering a cat as a child when a priest failed to resurrect his dog. In the final scene of this play, a train is heard approaching as a "rustle of wind across two continents" dismisses an unseen force that repeatedly knocks a character down the stairs. In this play, a (\*) boxcar fire that killed several hobos is cited as the origin of the Ghosts of Yellow Dog in a story told by Doaker. Berniece exorcises Sutter's ghost from the title object of this play, which corresponds to the 1930s in its author's Pittsburgh Cycle. For 10 points, name this August Wilson play in which Boy Willie attempts to sell the title instrument.**

ANSWER: *The **Piano Lesson*** <Bollinger>



### PACE NSC 2017 - Round 07 - Bonuses

1. Journeys across this mountain range connect some of the narratives in W.G. Sebald's *Vertigo*. For 10 points each:

[10] Name this European mountain range where the title character of Johanna Spyri's (SHPEE-ree's) children's novel *Heidi* lives.

ANSWER: Swiss **Alps** [or die **Alpen**]

[10] The unnamed traveler in Sebald's *Vertigo* recounts the imprisonment of this adventurer in the Doge's palace. This notorious 18th-century womanizer wrote the massive autobiography *The Story of My Life*.

ANSWER: Giacomo **Casanova**

[10] Two children get caught in a blizzard in the Alps on Christmas Eve in Adalbert Stifter's *Rock Crystal*, which was republished by this magazine's "Classics" line in 2015. This East Coast-based publication is often known by a four letter acronym.

ANSWER: **New York Review** of Books [or **NYRB**; or **New York Review** Books] <Brownstein>

2. Although the technology to make this item was invented centuries earlier, it was not until the mid-19th century that military units began to use it often because of the precision needed in manufacturing its cylindrical bullet. For 10 points each:

[10] Identify this type of firearm that, unlike a musket, has a grooved barrel for improved range and accuracy.

ANSWER: **rifle**

[10] This British rifle was inspired by Samuel Colt's American System and became the most popular rifle of the late 19th century.

ANSWER: **Enfield** Rifle

[10] The rifle became a feasible military weapon thanks to the cylindrical bullets invented by a military officer from this country in 1847. This country's generals devised Plan XVII (17) in opposition to another country's Schlieffen (SHLEE-fin) Plan.

ANSWER: **France** [The inventor was Claude-Étienne Minie.] <Bentley>



3. Dennis Gabor won a Nobel Prize for his invention of these things while working on an improvement to the electron microscope. For 10 points each:

[10] Identify these three-dimensional images created by the interference pattern between the object and reference beams.

ANSWER: **hologram** [or **holography**]

[10] Gabor's ideas didn't have much practical use until the 1960s with the development of these devices, which produce light of both high coherence and high intensity. The continuous-wave type of these devices are particularly useful in holography.

ANSWER: **lasers**

[10] One application of pulsed-laser holography is in these devices, in which it can be easier to use to measure changes in air density than optical interferometers. Extremely hot air is required for these devices that operate at hypervelocity speeds, and digital CFD modeling has reduced some of the need for using them.

ANSWER: **wind tunnels** <Bentley>

4. Answer the following about the sculpture collection of the Vatican Museums, for 10 points each.

[10] The first acquisition of what became the Vatican Museums was a sculpture of this mythological figure and his sons, in which snakes wrap themselves around this man's arms and legs.

ANSWER: **Laocoön** (lao-KOH-on)

[10] Two sculptures whose common names include this adjective, a marble torso and a contrapposto *Pythian Apollo*, influenced several of the figures in Michelangelo's *Last Judgment*, also on view in the museums. This architectural term also refers to an elevated structure built to take advantage of a "good view."

ANSWER: **Belvedere** [accept the **Belvedere Torso** or the **Apollo of the Belvedere**]

[10] The *Belvedere Torso* may depict this figure from Greek mythology. Another depiction of this muscular figure, named for the Farnese family, shows him leaning on a club on which he has draped the skin of the Nemean Lion.

ANSWER: **Hercules** [or **Heracles**] <Bentley>

5. The most common compound at this site is a quaternary amine called choline (**COAL-een**). For 10 points each:

[10] Give this common name for the hydrophilic part of the phospholipids that constitute the cell membrane. This polar moiety is linked to a diglyceride by a phosphate group.

ANSWER: polar **head** group

[10] Phospholipids in the cell membrane spontaneously organize themselves to form one of these geometric structures, which is composed two sheets of amphiphiles that align tail-on, with the head groups pointing outwards.

ANSWER: phospholipid **bilayer** [or lipid **bilayer**]

[10] This noun is used to refer to the two individual "outer" and "inner" sheets of the lipid bilayer. Flippases (**FLIP-aces**) move phospholipids between these two structures.

ANSWER: **leaflets** <Silverman>

6. As a young man, this person baited James Shields into a duel with broadswords, but Shields decided that this man's overwhelming size advantage would not have made for a fair fight. For 10 points each:

[10] Name this man who, despite being born in a log cabin in Hodgenville, Kentucky, set up a law practice and obtained a plurality in the Presidential Election of 1860.

ANSWER: Abraham **Lincoln** [or Abe **Lincoln**]

[10] This politician succeeded Simon Cameron as Lincoln's Secretary of War. After Lincoln's assassination and a falling out with Johnson, this man refused to resign his office.

ANSWER: Edwin **Stanton** [or Edwin McMasters **Stanton**]

[10] Some scholars assert that this famous epitaph given by Stanton after Lincoln died actually ended with the word "angels". Adam Gopnik wrote a long *New Yorker* article on this six-word quote, which he calls "the most famous epitaph in American biography".

ANSWER: "**Now he belongs to the ages**" [or "**Now he belongs to the angels**"] <Bentley>

7. A Christian apostate who was a member of this school of thought was inspired by the example of the Indian philosopher Kalanos to set himself on fire at the Olympic Games of 165 CE. For 10 points each:

[10] Identify this school to which Peregrinus Proteus belonged. Antisthenes is the traditional founder of this movement, whose name derives from the fact that, like dogs, adherents paid no heed to public moral standards.

ANSWER: **Cynic** [or **Cynicism**]

[10] This Cynic philosopher from Sinope partook in outrageous acts such as defacing Athenian coins in order to call attention to how Athenians no longer lived in step with nature. He supposedly went around with a lantern looking for an honest man.

ANSWER: **Diogenes** of Sinope

[10] Much of our knowledge of Cynicism comes from this other Diogenes, who noted how even contemporaries questioned whether Cynicism had a consistent doctrine or not. This man wrote *Lives and Opinions of Eminent Philosophers*.

ANSWER: Diogenes **Laërtius** <Bentley>

8. A passage in the *Odyssey* describes how nine groups of five hundred men were each sacrificing nine bulls on the shores of this kingdom. For 10 points each:

[10] Name this kingdom, commonly described as "sandy". Telemachus visits this kingdom to meet with its elderly king Nestor.

ANSWER: **Pylos** [prompt on **Gerena**]

[10] Nestor is the only Greek fighter in the Trojan War who was also part of this group, who were gathered by Jason to go questing for the Golden Fleece on a namesake boat.

ANSWER: **Argonauts** [or **Argonautai**]

[10] Arctinus of Miletus composed a now-lost epic about the death of this king of Ethiopia, a son of Eos and Tithonus who killed Nestor's son Antilochus during the Trojan War.

ANSWER: **Memnon** <Bentley>

9. John Singer Sargent painted a woman inhaling the smoke of ambergris during a visit to this city, where American author Paul Bowles spent the last 52 years of his life. For 10 points each:

[10] Name this city, the birthplace of Ibn Battuta. It was designated an "international zone" controlled by Britain, France, and Spain between the two World Wars.

ANSWER: **Tangiers**

[10] Tangier's port, Tanger-Med, is projected to become the largest port on this sea by 2018. Two autonomous cities named Ceuta (*SAY-oo-tah*) and Melilla (*meh-LEE-yah*) lie at the western end of this sea.

ANSWER: **Mediterranean** Sea

[10] Those autonomous cities border this country, in which Tangier is located. Tourists often visit its four "Imperial Cities," which include Fès and its current capital, Rabat.

ANSWER: **Morocco** [or Kingdom of **Morocco**; or al-Mamlakah al-**Maghribiyah**] <Shimizu>

10. In one collection by this author, the listener is given the advice, "You can tell a true war story by its absolute and uncompromising allegiance to obscenity and evil". For 10 points each:

[10] Identify this author who describes how Jimmy Cross burned some of the title objects in *The Things They Carried*.

ANSWER: Tim **O'Brien** [or William Timothy **O'Brien**]

[10] Tim O'Brien's *The Things They Carried* is set during this conflict. The Pulitzer-winning novel *The Sympathizer* opens with the narrator and the General escaping Saigon during the final days of this conflict.

ANSWER: **Vietnam** War [or **Second Indochina** War; or **Vietnamese** Civil War]

[10] The platoon in "The Things They Carried" is shocked by the death of this character, whose twenty pounds of ammo and tranquilizers couldn't protect him from a sniper. The delicate nature of the flower that this character is named for is a recurring symbol in the story.

ANSWER: Ted **Lavender** [or **Ted** Lavender] <Bentley>

11. In one portrait, this monarch's right hand reaches out to a globe to symbolically show dominance over North America. For 10 points each:

[10] Identify this monarch, the subject of a portrait by George Gower in which a fleet of ships, cast in shadow, are being destroyed against rocks in a window in the top-right of the painting. This monarch is also the subject of the Darnley Portrait.

ANSWER: **Elizabeth I** [prompt on partial answer]

[10] This artist painted several portraits of Elizabeth's father, Henry VIII, including one of the monarch with the barber surgeons. This German-born artist also painted *The French Ambassadors*, alternately known as *The Ambassadors*.

ANSWER: Hans **Holbein** the Younger

[10] An anamorphic one of these objects is present in the foreground of *The French Ambassadors*. They're not fruit, but Paul Cezanne painted a still life of one of these things and a water jug.

ANSWER: a human **skull** <Bentley>

12. Alberto Ruz Lhuillier (*tweel-YAY*) was buried at this site in honor of his work excavating it, and Jean-Frederic Maximilien de Waldeck supposedly lived on top of its Temple of the Count for three years while illustrating its ruins. For 10 points each:

[10] Identify this city that flourished during the Late Classic Period. A tomb was found beneath the Temple of the Inscriptions at this site in 1952.

ANSWER: **Palenque**

[10] Palenque (*pah-LEN-kay*) is one of the most impressive cities built by this Mesoamerican people. Their other centers, including Copán and Tikal, all collapsed by the 10th century CE.

ANSWER: **Maya** [or **Mayan** people]

[10] Waldeck's drawings of Palenque distorted the buildings to look more like those of this culture on the discredited idea that there was a link between them. An important relic from this civilization is the Narmer Palette.

ANSWER: Ancient **Egyptian** <Bentley>

13. This man included various fairy-like creatures among the *longaevi* in his nonfiction monograph on the medieval worldview, *The Discarded Image*. For 10 points each:

[10] Name this British writer who argued that good books are those that invite good reading in *An Experiment in Criticism*. He also wrote the memoir *Surprised by Joy*.

ANSWER: Clive Staples **Lewis**

[10] This character created by Lewis "Proposes a Toast" before the Tempters' Training College in the sequel to a work in which he offers advice to his nephew, the junior demon Wormwood.

ANSWER: **Screwtape**

[10] This friend of Lewis and fellow Inkling wrote the essay "On Fairy-Stories," in which he describes the emotional power of unexpectedly good "eucatastrophes," like the arrival of eagles in his *The Hobbit*.

ANSWER: John Ronald Reuel **Tolkien** <Kothari>

14. Answer some questions about movements to help Jews reclaim their Jewish heritage, for 10 points each.

[10] This organization provides free ten-day trips to Israel for young Jewish adults. Sheldon Adelson has donated more than 250 million dollars to this organization.

ANSWER: Taglit-**Birthright** Israel

[10] This term refers to a secular Jew who adopts religious Judaism later in life. This Talmudic term, which translates to "master of repentance," is often contrasted with "frum from birth."

ANSWER: **ba'al teshuva** (*buh-ALL choo-VAH*) [or **BT**; or **chozer b'tshuva**]

[10] The Jewish Renewal movement is strongly influenced by this mystical tradition, whose modern form was started by Isaac Luria. The *Zohar* is a central text for this tradition, many of whose followers tie a red string around their wrist.

ANSWER: **Kabbalah** <Kothari>

15. Ivan Pavlov's discovery of classical conditioning in dogs had a major influence on this school. For 10 points each:

[10] Name this school of psychology that explained actions in terms of either reflexes or responses to reinforcement and punishment. Its proponents included B. F. Skinner.

ANSWER: **behaviorism** [accept word forms]

[10] The birth of behaviorism is often attributed to the lecture "Psychology as the Behaviorist Sees It," which was given by this man. He performed the "Little Albert" and kerplunk experiments.

ANSWER: John Broadus **Watson**

[10] The death of behaviorism is widely credited to this review of a B. F. Skinner book, which claimed that Skinner's functional analysis cannot explain language acquisition. Name both the reviewer and the book reviewed.

ANSWER: Noam **Chomsky**'s review of *Verbal Behavior* <Kothari>

16. Vincent d'Indy (**van-SAWN dan-DEE**) inspired a cycle of five symphonies by this man beginning with 1916's "The Unforeseen" and ending with 1920's now-lost "Peace". For 10 points each:

[10] Name this 20th-century composer who included the song "Rasga o coração" (**HOSS-guh oh koo-ruh-SOW**), or "Rend the heart", in the tenth of his street-music-inspired *Chôros* (**SHOW-roos**).

ANSWER: Heitor **Villa-Lobos** (**ay-TOR vee-luh-LOH-boos**)

[10] The first of Villa-Lobos's *Bachianas Brasileiras* ends with "The Little Train of the Caipira", a movement in this musical form. Bach himself used one of these pieces as the opening of a spooky D minor organ piece.

ANSWER: **toccata** [prompt on Toccata and Fugue in D minor]

[10] Villa-Lobos composed a twelve études and a 1951 concerto for Andrés Segovia, a player of this string instrument. Its classical players tend to rest it on a raised left knee and use nylon strings, rather than the metal strings often found on its acoustic or electric counterparts.

ANSWER: **guitar** [accept classical, acoustic, or electric **guitar**] <Carson>

17. A 2016 paper in *Science* reported that a nanotextured form of this material fifteen nanometers thick could absorb 99 percent of incoming light. For 10 points each:

[10] Name this extremely conductive material, a two-dimensional sheet of carbon atoms that can be obtained by peeling off graphite with a piece of Scotch tape.

ANSWER: **graphene**

[10] Graphene and graphite are examples of these substances for carbon. This term refers to the different physical forms that a pure element can exist in.

ANSWER: **allotropes** [or **allotropy**]

[10] Graphene oxide is being investigated for its potential use in this industrial process because of its very high specific surface area. Metal-organic frameworks are another attractive option for making up the beds of molecular sieves where this industrial process takes place.

ANSWER: gas **adsorption** [or gas **storage**; wastewater **adsorption**; or **sorption**; or **adsorbents**; prompt on gas purification; do not accept or prompt on "absorption"] <Silverman>

18. This city periodically undergoes "folding" and has a population divided into three classes in a 2016 novella. For 10 points each:

[10] Name this world capital in which a physicist and a nanomaterials researcher discovers a plot by alien Trisolarians to invade the Earth in the novel *The Three Body Problem*.

ANSWER: **Beijing** [or **Peking**; accept **Folding Beijing**]

[10] The aforementioned novella *Folding Beijing* was the first Chinese book to win "Best Novella" in this set of science-fiction and fantasy awards. It is named for the "father of science fiction."

ANSWER: **Hugo Awards**

[10] Liang Qiao (**tyong chow**) inaugurated Chinese science fiction in the 20th century by translating this author's "Fifteen Little Heroes." This French author also wrote *Around the World in 80 Days*.

ANSWER: Jules **Verne** <Jose>

19. Pebbles of this rock are sometimes called "Apache tears". For 10 points each:

[10] Name this igneous rock, which is formed by the rapid cooling of felsic lava. It has a glassy luster and is frequently used to make scalpel blades.

ANSWER: **obsidian**

[10] Obsidian is an example of this kind of igneous rock, which is formed after the source lava has left the interior of the Earth. Basalt and rhyolite are other examples of this kind of igneous rock.

ANSWER: **extrusive** [prompt on **volcanic** rocks]

[10] Because obsidian forms when lava cools relatively rapidly, significant crystal growth does not occur, making it this kind of rock in which the crystal structure is nonexistent or invisible to the naked eye.

ANSWER: **aphanitic** <Jose>

20. A namesake act establishing these things in the United Kingdom in 1871 created four of them in England, including the First Monday in August. For 10 points each:

[10] Identify these occurrences. According to John Lubbock's bill, the businesses in the name of these events had to observe the same regulations on days such as Whit Monday as they did on Christmas Day.

ANSWER: **bank holidays** [prompt on **holiday**]

[10] Prime Minister Harold Wilson declared an emergency bank holiday in March 1968 to deal with a crisis arising from the market for this stuff in London. A "window" for this stuff ended with the Nixon Shock in 1971.

ANSWER: **gold** [or **gold** bullion]

[10] Beginning in 2008, St. Andrew's Day officially became a bank holiday in this constituent country in the United Kingdom. This country narrowly rejected independence from the UK in 2014.

ANSWER: **Scotland** <Bentley>

21. This author's theory of an all-determining force called the Immanent Will is referenced by a line about the "President of the Immortals" at the end of one of his novels. For 10 points each:

[10] Name this British novelist and poet who wrote of "The Immanent Will that stirs and urges everything" in "The Convergence of the Twain." His other pessimistic poems include "Hap" and "The Darkling Thrush."

ANSWER: Thomas **Hardy**

[10] The narrator states "the President of the Immortals... had ended his sport" with this Hardy novel's title character after her execution. This novel's protagonist believes she may belong to the d'Urberville royal family.

ANSWER: **Tess of the d'Urbervilles: A Pure Woman Faithfully Presented**

[10] The "Immanent Will" is similar to the "ingenious machinery contrived by the Gods" that confounds this Thomas Hardy character, who asks that "no man remember me" in his will years after giving his wife Susan to a sailor at a fair.

ANSWER: **Michael** Henchard [or Michael **Henchard**; prompt on *The Mayor of Casterbridge*] <Brownstein>